NO MORE WHIPPING BOY
IT should take credit for its role in business success, says Paul M. Ingevaldson. PAGE 8A

SEE NO EVIL
Detecting network intrusions, such as the one at TJX, can be harder than preventing them. PAGE 8

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GAME CHANGER

Kiva is using IT to connect small-stakes lenders with impoverished entrepreneurs around the world.

Check out the future of microfinance PAGE 31

Revolutionizing global lending (left to right): Olana Kahn, Jeremy Frazao, Jessica Jackley Flannery, Matt Flannery and Fiona Ramsey

IT Struggles to Show BI Value

Use of tools grows, but execs still seek hard ROI numbers

BY HEATHER HAVENSTEIN
LAS VEGAS

Though business intelligence has become a lifeblood application in many companies, IT executives say they must continue to prove its worth to top management.

For example, Lowe's Companies Inc. CIO Steve Stone noted that the retailer has been using BI tools for years to identify fraudulent returns,

BI Value, page 41

Users Not Rushing on Vista, Office 2007

OS validation, new Office user interface slow upgrade plans

BY CAROL SLIWA
Although Microsoft Corp. is staging the general launch of Windows Vista and Office 2007 today, corporate users have had access to the new software since late November.

But that early access isn't translating into early deployments for most business customers, judging by an e-mail poll of 40 IT managers conducted by *Computerworld* last week. Even though Microsoft took pains to try to remove some of the barriers that often hinder upgrades, only three respondents said they expect Vista to be deployed on more than half of their companies' systems by year's end.

> **All the work is on our side; all the benefit accrues to Microsoft.**
>
> **GEORGE DEFENBAUGH,** HESS CORP., ON VISTA'S SOFTWARE PROTECTION PLATFORM TECHNOLOGY

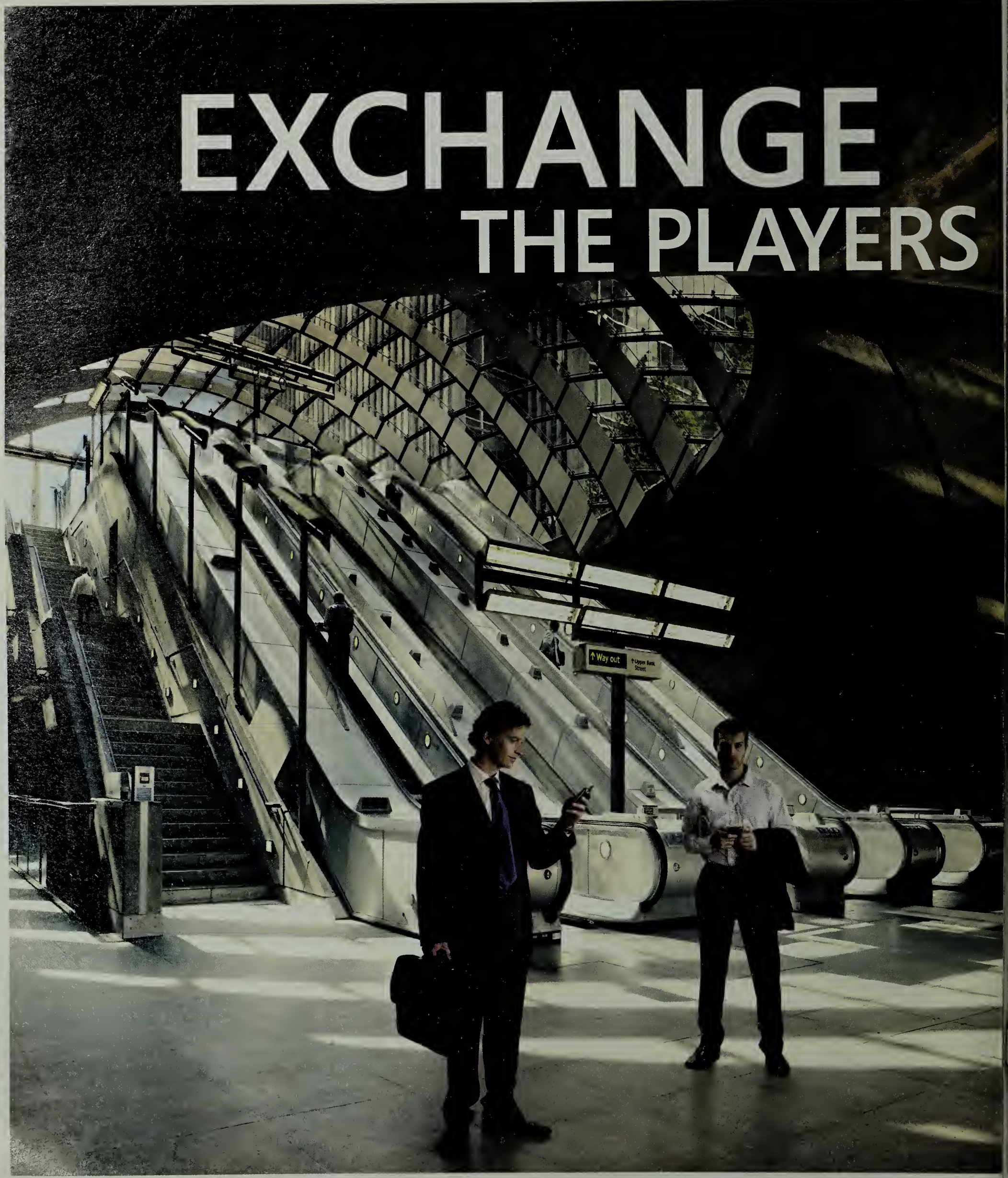
Only six said they anticipate installing Office 2007 that broadly by then, and the vast majority predicted that they will be running both of the new products on only a few

Vista, page 16

NEWSPAPER

EXCHANGE

THE PLAYERS



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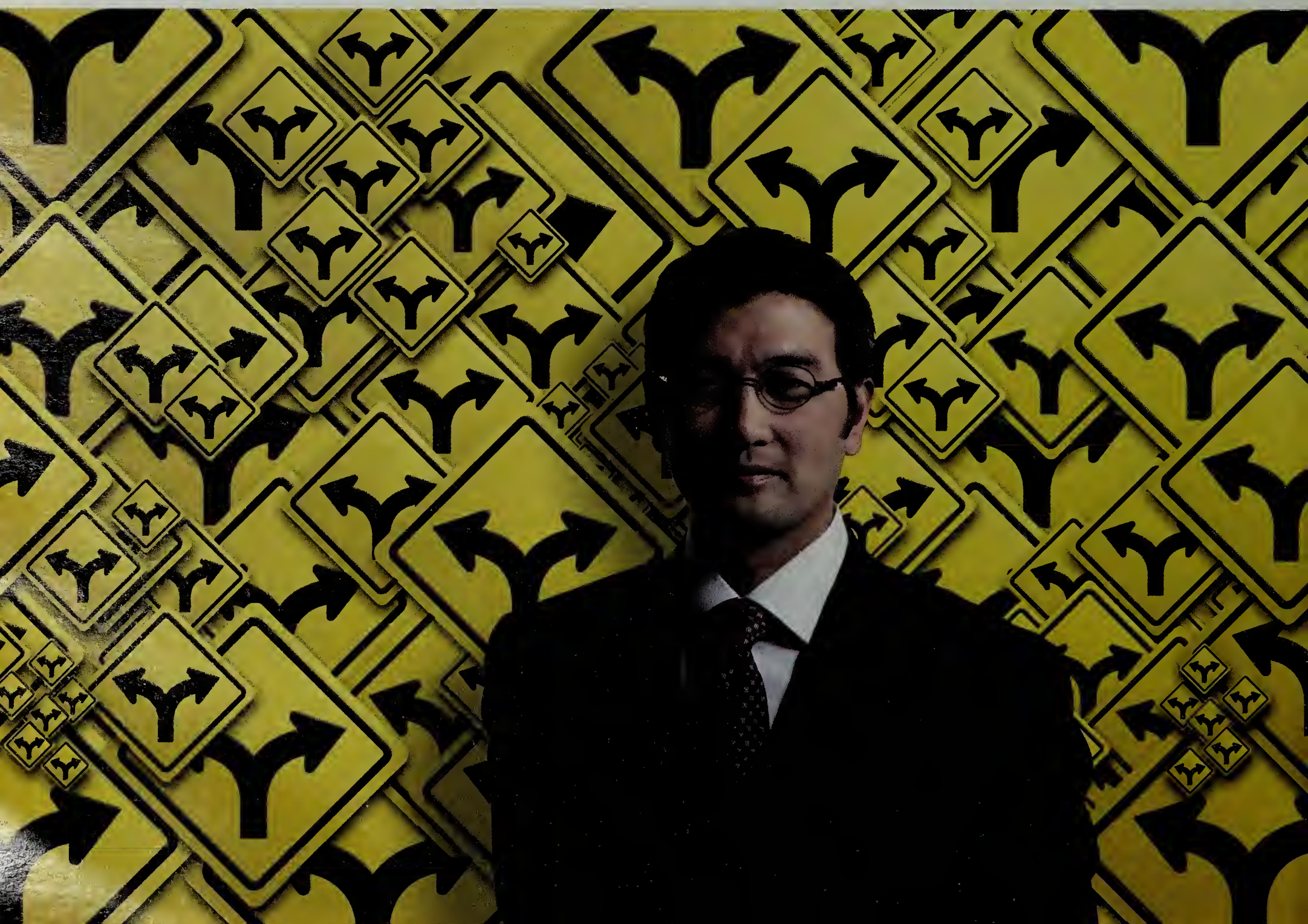

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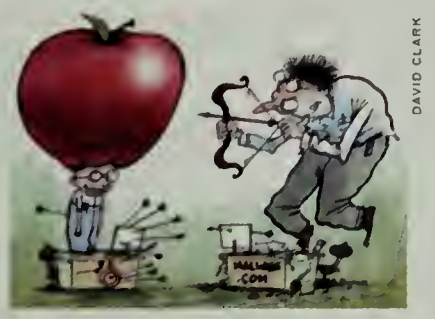
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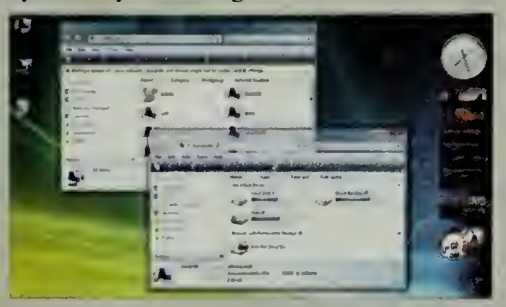
VISTA LAUNCH

Learn all you need to know about Microsoft's latest Windows operating system by checking out these stories:



Hands On: A Hard Look At Windows Vista
Don't miss our in-depth review and visual tour.

Under the Hood: What's Different About Vista's GUI?
In this excerpt from *Windows Vista Unveiled*, Paul McFedries explains the Windows Presentation Foundation (formerly Avalon), how it improves graphics performance and why software developers will love it.

Buying a Computer for Vista . . . and Beyond
With some careful planning, you can buy PCs that will both support Vista and last well beyond today's standard three-year life span.

Top Windows Time-saving Tips
These shortcuts will save hand motions as well as time when you're using Microsoft's OS. And most of them work for other versions of Windows as well as Vista.

Find all this, plus our latest Vista coverage, at **www.computerworld.com/07/vista**

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AT DEADLINE

Users Warned of Word Vulnerability

Symantec Corp. has issued a warning that hackers are exploiting a new, unpatched vulnerability in Microsoft Corp.'s Word software that could allow them to take control of a victim's computer. The attack comes via an infected e-mailed Word document. Security vendor Secunia ApS rated it as "extremely critical," its highest-level warning. Microsoft, however, said the attacks are "very limited."

Four Lose Jobs Due To CA Outsourcing

CA Inc. said that at least three or four CA workers will lose their jobs due to the company's decision to outsource human resources services to Brussels-based Arinso International NV. At the same time, CA confirmed that three top executives have left the company. Sam Greenblatt, senior vice president of innovation; Gary Starkey, senior vice president of CA's executive technology advisors division; and Toby Weiss, senior vice president of the security management unit, departed CA this month.

Microsoft Blames Vista for Profit Dip

Microsoft, citing significant spending to prepare for the launch of the new Vista operating system, said that its second-quarter profits fell 28% while revenue increased 6%.

MICROSOFT BY THE NUMBERS

	REVENUE	PROFIT
Q2 '07	$12.5B	$2.6B
Q2 '06	$11.8B	$3.7B

Oracle Ships Apps Before Unveiling

Oracle Corp. quietly released its new E-Business Suite Release 12 to customers a few days in advance of a launch event planned this week in New York. In a blog posted late last week, Steve Chan, director of applications technology integration, said the new version was immediately available for download.

Sun Teams With Intel, Aims For Broader x86 User Base

Drops Opteron-only stance, plans to roll out Xeon-based systems by June

BY PATRICK THIBODEAU

THE IT direction that Canadian insurer Medavie Blue Cross has set for itself illustrates one of the reasons why Sun Microsystems Inc. announced last week that it has agreed to once again sell servers based on Intel chips.

When Medavie started running Web applications in 2000, Sun's UltraSparc-based systems dominated that market, and software vendors were desigining applications specifically for Sun's Solaris operating system, said Don McPhee, director of technical services at the Moncton, New Brunswick-based insurer.

But he added that as lower-cost x86 servers have become increasingly capable, Medavie has been moving to "more commodity-based" systems running Linux and using processors from either Intel Corp. or Advanced Micro Devices Inc. "Things have changed," McPhee said. "We just went with the momentum."

Now Sun is changing. Two years after the company dropped several low-end servers based on Intel chips and decided to rely solely on AMD for x86 devices, Sun said it will develop a full of line of servers and workstations with Intel's Xeon processors. Sun plans to start shipping Intel-based systems by June, and the two vendors will work together to optimize Solaris for hardware built around Intel's x86 chips.

Sun CEO Jonathan Schwartz said during a teleconference that about 70% of Solaris x86 users are running the operating system on Intel-based hardware. But Sun expects the new combination of Xeon and its OpenSolaris open-source software to attract more interest from independent software vendors.

Two-Year Hardware Cycles

2003 Sun says it will start selling Solaris and Linux servers based on AMD's Opteron processor.

2005 The company drops a line of Intel-based servers and standardizes on Opteron for x86 hardware.

2007 Sun signs a new agreement to use Intel's Xeon chips in servers and workstations.

In addition, Sun officials acknowledged that UltraSparc-based systems have become too expensive for many users looking to run Web applications. "The customers who left us post-bubble didn't want to leave us," said Scott McNealy, Sun's chairman. But, he added, customers no longer could afford the cost of the company's systems when "the Xeon thread was so much cheaper."

Until recently, though, Intel was having trouble developing Xeon chips that matched the performance of AMD's Opteron processor. Since July, Intel has added two higher-performance and more power-efficient chips: the dual-core 5100, code-named Woodcrest, and the quad-core 5300, code-named Clovertown.

Stephen Josselyn, an analyst at research firm IDC, said Sun has been fighting the same battle against x86 hardware in the low-end server market that other Unix vendors with RISC-based processors have been.

A return to Intel chips should help Sun sell Solaris servers to a broader market and enable it to offer more options to data center managers who are turning to x86 technology, said Nathaniel Martinez, another IDC analyst.

Sun will continue to offer Opteron-based systems as well, and an AMD spokesman said Intel's backing of Solaris "is good for all of us." He added that everything he has heard about the Sun-Intel deal indicates that it will be complementary to Sun's existing business relationship with AMD. ◗

Ben Ames and Robert McMillan of the IDG News Service contributed to this story.

Technical Gains Give Intel New Appeal, Sun Exec Says

JOHN FOWLER, Sun's executive vice president of systems, spoke with *Computerworld*'s Patrick Thibodeau last week about the company's new alliance with Intel. Excerpts from the interview follow:

What kinds of improvements can users expect in how Solaris operates on Intel-based boxes? There are several things. Taking advantage of advanced power management features, we'll work directly with Intel to reduce power utilization of servers at different workloads. The second thing we're going to work with them on is I/O performance. Intel platforms have some I/O acceleration features, and we can integrate changes in Solaris that greatly improve the efficiency and the performance of I/O on those platforms.

The third area that we can work on is reliability. Solaris has this feature called self-healing, which is the ability to properly handle problems in the hardware and then continue to operate. Together with Intel, we can make [that feature] work particularly well on Intel platforms so we have really high degrees of reliability.

When will those improvements appear? Where most of these changes will appear is actually in OpenSolaris first. And they'll start appearing during calendar 2007. It's basically going to be a continuous thread of innovation, not just some big bang.

Are you going to try to create Intel-based systems that can scale up to a large number of processors? We're going to collaborate on greater than four-way systems. And that can be a whole bunch of different activities – making sure Solaris works well on them, as well as designing systems around them. Beyond that, I'm not going to go into any details of what exactly we're doing, because I don't want to disclose any future product plans at this time.

Until 2005, Sun sold some Intel-based low-end servers. Why did you discontinue those products and switch to AMD for x86 processors? Before [Intel] came out with Woodcrest, their products were not at all performance-competitive with AMD's. Because we were just starting out in the [x86] business, we decided to concentrate our engineering and marketing resources around AMD, and that's been very successful for us. Now we're at a stage where adding Intel is a very logical thing to do – especially since their technology has improved dramatically.

Intel wants to expand the reach of x86 systems in enterprise markets where Sun is a big player, including financial services and telecommunications. It sounds as if it's trying to take some of your UltraSparc market. They're always going to want to do that. But the reality of it is, if Intel is going to take my UltraSparc market, I'd rather it be in the product I sell as opposed to somebody else's.

Do you see the development of Intel-based servers that can compete with your high-end UltraSparc systems as a result of this agreement? There's nothing presently planned here that's at that same scale. Obviously, in the lower parts of the [server] range, they've always been competitive with UltraSparc, and that doesn't seem to matter. Sparc [hardware] still does quite well.

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BRIEFS

Alcatel-Lucent Expects Poor Q4

Alcatel-Lucent SA said revenue and profit for its fourth quarter will be significantly lower than it was a year earlier, blaming consumer and employee uncertainty about the merger of Alcatel SA and Lucent Technologies Inc. The merger closed on Nov. 30. The company now expects combined fourth-quarter revenue to total €4.42 billion ($5.7 billion U.S.), down from €5.25 billion ($6.77 billion U.S.) last year. The results will be announced Feb. 9.

McAfee Tool Causes Notes Problems

The latest upgrade to McAfee Inc.'s VirusScan Enterprise security software is causing hiccups for some versions of IBM's Lotus Notes. The problem affects users of VirusScan Enterprise 8.5i who are also using the R6 or R7 versions of Lotus Notes. The companies recommend disabling two settings in McAfee's software: "Scan all server databases" and "Scan server mailboxes."

Sun Reports First Profit in a Year

Sun Microsystems Inc. reported its first quarterly profit in more than a year, on a 7% increase in revenue in its second fiscal period, which ended Dec. 31. Sun credited sales of its x64 servers and growing acceptance of the Solaris 10 operating system.

SUN BY THE NUMBERS

	REVENUE	PROFIT
Q2 '07	$3.6B	$126M
Q2 '06	$3.3B	($223M)

IEEE Working Group OKs 802.11 Spec

The IEEE 802.11n working group has approved the next draft version of the wireless LAN standard specification. A release of the draft will begin shipping this week as Version 2.0. Voting on the final Version 2.0 is expected to be completed by the end of March. A new draft, Version 3.0, will be ready by the end of May.

Feds to Let Two Firms Test E-voting Machines

NIST certifies iBeta, SysTest Labs under latest requirements guidelines

BY MARC L. SONGINI

THE FEDERAL government this month took the first step in certifying two laboratories for testing electronic voting machines.

The National Institute of Standards and Technology (NIST), in its role as a scientific adviser to the U.S. Election Assistance Commission (EAC), said that the labs of iBeta Quality Assurance in Aurora, Colo., and SysTest Labs LLC in Denver meet the technical requirements of the latest federal testing guidelines.

A decision on final accreditation will come after the EAC conducts a nontechnical evaluation of the companies, including reviews of their conflict-of-interest policies, organizational structures and record-keeping procedures, said an EAC spokeswoman.

The agency has not set a timetable for finishing its part of the certification process, the spokeswoman said. However, she added, "completing this process in a timely fashion is a top priority."

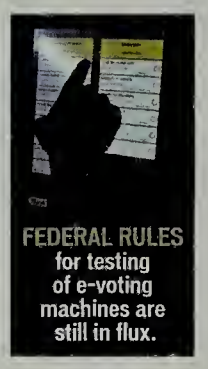
Carolyn Coggins, quality assurance director for voting at iBeta, said her company expects to learn the next step in the process in a letter the EAC should be sending out during the next couple of weeks.

A Moving Target

Coggins did note that the guidelines are a moving target. The EAC is already re-evaluating the 2005 standards, and new criteria will likely be released later this year, she said.

The EAC is tasked with creating a framework to help states comply with the Help America Vote Act, which Congress passed in 2002 to improve federal, state and local voting processes. The law directed states to replace manual voting systems with electronic ones and tasked the EAC with developing a national program for the testing, certification and decertification of e-voting machines.

The EAC does not require that states use only e-voting machines that it certifies. However, some states, including New York, do mandate that all machines be certified by the agency.



FEDERAL RULES for testing of e-voting machines are still in flux.

The NIST approval of the iBeta and SysTest processes, announced on Jan. 18, is the latest milestone in a process that has been mostly in a state of flux since the EAC's creation in 2002.

Before that, accrediting test labs and certifying voting machines was done on a voluntary basis by the National Association of State Election Directors, using guidelines issued by the Federal Election Commission (FEC), which oversees election laws.

Shifting Responsibility

The FEC issued its final guidelines in 2002, just before the EAC took over that responsibility.

The EAC issued its first set of guidelines in 2005, the EAC spokeswoman said. The two labs NIST approved this month were audited under both the 2002 and the 2005 guidelines, she said.

The EAC already offers an interim accreditation to testing labs whose operations were approved by the voluntary group under its 2002 guidelines but have yet to gain approval for meeting 2005 specifications. The interim certification is valid only through 2008.

SysTest and Wyle Laboratories Inc. in Huntsville, Ala., earned interim EAC accreditation in August 2006, the spokeswoman said. A third testing firm, Ciber Inc. in Greenwood Village, Colo., has been evaluated but has yet to gain the commission's approval, she said.

Despite the progress, some e-voting experts still consider the testing process to be flawed. Michael Shamos, a professor who specializes in e-voting issues at Carnegie Mellon University in Pittsburgh, believes that the entire system of testing and certifying e-voting machines must be redrawn. He contended that inaction by the election agency will cause a loss of confidence in the voting system.

He also said that the entire machine design, implementation, certification and testing process must be completely transparent, and that the federal government must mandate adherence to EAC guidelines. ▸

New York Halts E-voting Machine Testing

THE NEW YORK STATE Board of Elections has suspended the testing and certifying of electronic voting machines after learning of flaws in the test methods of the company it hired to do the job.

For several months, Ciber Inc. had been testing machines under evaluation for purchase by the state under a $3 million contract signed in 2005.

The Ciber testing process had gained accreditation under federal guidelines set in 2002 but has yet to be certified for meeting updated requirements created in 2005.

The U.S. Election Assistance Commission last summer failed to grant Ciber's request to gain special interim accreditation that is available to companies whose application for 2005 certification has yet to be acted upon.

That failure, first reported by *The New York Times* earlier this month and confirmed last week by the EAC, was blamed on undisclosed problems with Ciber's documentation process, said an EAC spokeswoman.

The EAC has so far declined to provide a report on its audit of the Ciber process to New York officials or to make it public.

"The initial audit identified issues, and we asked [Ciber] to address them," the spokeswoman said. "They came back and gave us an update on what's happening, and we're now reviewing that information. The process requires due diligence."

Late last week, Ciber sent 150 pages of information about the audit to state officials. A spokesman for the New York State Board of Elections said its staff is reviewing the material.

The spokesman said the state will not allow Ciber to continue testing machines until it can identify the problems in its processes. The review will be done "expeditiously," said the spokesman.

A Ciber spokeswoman defended the company's testing lab and its processes.

In an e-mail statement to *Computerworld*, she said, "The issues found in the audit do not reflect on the accuracy of tests conducted before the audit. Ciber was accredited at the time those tests were conducted, and they met all of the standards set for testing and accreditation at that time."

The spokeswoman said that the issues raised in the initial audit have been addressed and that Ciber staffers "are awaiting final results from the EAC" on the accreditation application.

– MARC L. SONGINI

Spotting System Intrusions a Big Challenge for IT

Lag between breach at TJX and its discovery isn't a surprise, execs say

BY JAIKUMAR VIJAYAN

Protecting corporate systems against intruders isn't easy. But detecting a breach that has actually happened can sometimes be even harder, IT managers and analysts said last week in the wake of the high-profile data compromise at The TJX Companies Inc.

The system intrusion at the Framingham, Mass.-based retailer occurred last May but wasn't discovered until mid-December — seven months later. TJX publicly disclosed the breach two weeks ago.

In a similar incident at Ohio University, a server break-in that exposed the personal data of about 137,000 alumni went unnoticed for more than a year before being discovered last spring along with several other security breaches.

The gap between the intrusion at TJX and its discovery isn't entirely surprising, given the myriad ways attackers can gain access to systems and then conceal their tracks, said Drew Maness, a senior security strategist at a large entertainment company that he asked not be named.

"The reason it's so difficult [to discover a data breach] is because it can come at you from any angle," Maness said. "With physical security, it's very rare that someone breaks in through a side wall on the eighth floor. With computer security, they come in through that side wall."

To quickly and consistently detect such intrusions, IT managers need to be able to collect and analyze literally every transaction flowing through their networks in real time, according to Maness. "You've got to know what every single packet on the network is doing, where it's coming from, where it's going and which ones are bad," he said.

> **With physical security, it's very rare that someone breaks in through a side wall on the eighth floor. With computer security, they come in through that side wall.**
>
> **DREW MANESS,** SENIOR SECURITY STRATEGIST

That can be a huge challenge, considering the sheer number of transactions and the terabytes of storage space required on a daily basis to store log data about all of them, said David Jordan, chief information security officer for Virginia's Arlington County. It also requires comprehensive modeling of typical network behavior enterprisewide so any abnormal activity can be pinpointed, Jordan said.

Few Existing Products

For now, at least, there are few out-of-the-box products that can help companies do end-to-end log collection and real-time data correlation and analysis, said Amer Deeba, vice president of marketing at Qualys Inc., a vulnerability management services provider in Redwood Shores, Calif. And the cost of custom-building such capabilities can be prohibitive, added Deeba.

But there are some tools that IT managers can use to address parts of the challenge, Deeba noted. For instance, several logging and monitoring tools are available for quickly detecting unauthorized database activity.

USEC Inc., a $1.6 billion energy company in Bethesda, Md., uses an appliance from Guardium Inc. to monitor the activities of the administrators who manage the Oracle and SQL Server databases underlying its financial applications. The Guardium device can detect unauthorized changes and other policy violations that could affect the integrity of USEC's financial data, said CIO David Vordick.

The technology also enables USEC to monitor compliance with Sarbanes-Oxley financial reporting regulations and provides the company with a real-time security-alerting capability, Vordick said.

Accor North America, a Carrollton, Texas-based operator of hotel chains such as Red Roof Inns and Sofitel, is using an appliance from Imperva Inc. to detect unusual database activity as it occurs. Such tools let companies move from a "passive security" model to a more aggressive one, said Jaimin Shah, a senior security engineer at Accor.

Being able to do the same kind of monitoring of all network and system assets could help companies detect suspicious activity more quickly, Shah said. "The problem is that monitoring generates a tremendous amount of logs," he said, adding that "getting the right information as quickly as we can" is a challenge.

Vendors such as LogLogic Inc. are beginning to offer more efficient ways to sift through log data, Maness said. But he still expects it to take up to 10 years to develop true end-to-end capabilities for tracking networks. ▸

VA, Pentagon Commit to Joint E-health Records

But agencies still working out how to merge systems

BY LINDA ROSENCRANCE

The U.S. Department of Veterans Affairs and the U.S. Department of Defense last week said they have agreed to develop a joint electronic health records (EHR) system.

But officials from the VA and DOD indicated at a congressional hearing that the two agencies still haven't figured out exactly how to meld the separate health records technologies they now use.

In identical comments submitted at the hearing held by the Senate Committee on Veterans' Affairs, VA Deputy Secretary Gordon Mansfield and David Chu, undersecretary of defense for personnel and readiness, said the agencies see "an opportunity to explore a 'born seamless' approach for a joint inpatient EHR."

Analysis Planned

But Mansfield added that there are some known differences between the VA's and DOD's health care data, processes and requirements. A planned analysis "will identify the areas of commonality and the areas of uniqueness" and then determine the potential benefits and downsides of deploying a common EHR system, Mansfield said.

Last week's announcement came seven months after the Government Accountability Office issued a report calling on the VA and DOD to improve their efforts to standardize health records. The GAO said the agencies had made some progress in sharing data about patients who receive care from both departments. But the agencies had yet to develop a clearly defined project management plan, it added.

Chu testified last week that the DOD "is aware of the concerns regarding the time it has taken to establish the desired level of interoperability."

The ultimate goal, Chu said, is to create health care records that can be accessed and used by doctors "regardless of which health care system they are operating within." ▸

Bankers Association Says Stolen Card Data Was Used in Purchases

CREDIT AND DEBIT CARD numbers compromised in the security breach at TJX have been fraudulently used in at least three U.S. states and two foreign countries, according to a group that represents Massachusetts banks.

The Massachusetts Bankers Association (MBA) said that as of last Wednesday, card numbers taken from TJX's systems had been used to make fraudulent purchases in Georgia, Florida and Louisiana, as well as in Hong Kong and Sweden.

Both MasterCard International Inc. and Visa U.S.A. Inc. declined to comment on the MBA's claims about fraudulent uses of card numbers. TJX officials didn't respond to requests for comments about the reported misuse of card data.

In addition, the MBA said it is "strongly" pushing for state legislation that would require credit card firms to quickly disclose the source of a retail data breach. MasterCard, Visa and other card companies typically don't divulge that information to card-issuing banks when notifying them of security incidents.

Daniel Forte, the MBA's CEO, said in a statement that the credit card companies also should hold the source of a breach financially liable – especially if the retailer was storing card data in violation of the Payment Card Industry (PCI) Data Security Standard.

TJX hasn't disclosed what information was compromised. But according to the MBA and other financial industry sources, the retailer appears to have been storing account numbers, expiration dates and other so-called Track 2 data taken from the magnetic stripe on the back of cards. Keeping such data is forbidden under PCI.

The fact that Track 2 data likely was among the compromised information is disappointing, said Ryan Fisher, senior risk manager at Madison, Wis.-based CUNA Mutual Group, which insures about 5,500 credit unions. He also said there is "a certain level of disappointment" that credit card companies haven't been enforcing the PCI standards more effectively.

– JAIKUMAR VIJAYAN

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_INFRASTRUCTURE LOG

_DAY 45: These underutilized storage boxes have proliferated exponentially. Their inability to share capacity has doomed us. We're trapped in a maze of our own creation.

_DAY 47: I tried to give Gil a boost over this wall, but he pulled a hammie.

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BRIEFS

Linux Groups Join to Take on Microsoft

Open Source Development Labs Inc. and Free Standards Group Inc., two key champions of the open-source Linux operating system, have merged to form the Linux Foundation. The new group will focus on helping the Linux community more effectively compete with Microsoft Corp.'s Windows software, Linux's primary competitor. The combined entity will employ 45 workers and have about 70 user, vendor and university members.

Oracle Adds Linux Management Tools

Oracle Corp. has unveiled a line of management tools for Linux, just three months after announcing plans to provide support for Red Hat Inc.'s implementation of the operating system. The Oracle Management Pack for Linux includes tools to provision, patch, monitor and administer Linux server deployments. The software is part of the Oracle Unbreakable Linux program.

RSA, VMware Sales Propel EMC's Q4

Citing strong growth in its RSA Security Inc. and VMware Inc. subsidiaries, EMC Corp. reported a 19% increase in fourth-quarter revenue. Overall, the company said its systems, software and services sales showed double-digit growth during the fiscal quarter that ended Dec. 31.

EMC BY THE NUMBERS

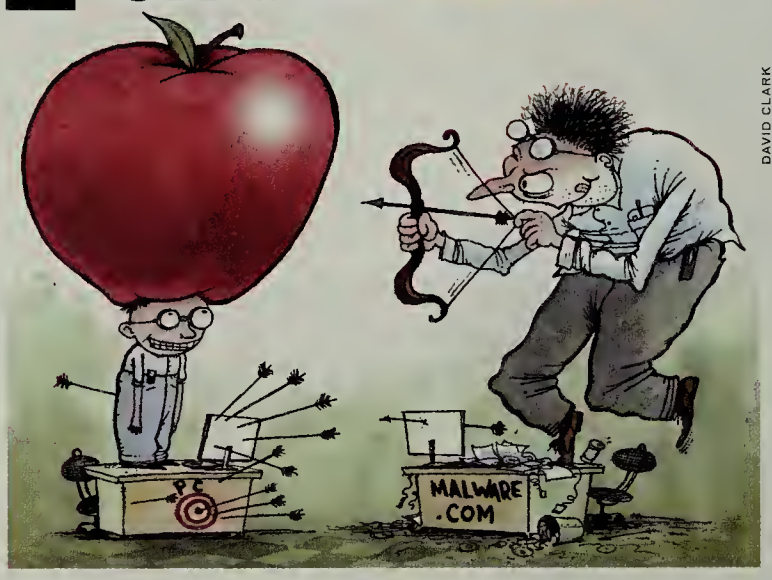
	REVENUE	PROFIT
Q4 '06	$3.2B	$389M
Q4 '05	$2.7B	$148M

FTC OKs Brocade's McData Acquisition

The Federal Trade Commission has approved the pending acquisition of McData Corp. by Brocade Communications Systems Inc. The FTC approval removes the last regulatory hurdle to the deal. Brocade, a maker of storage-area network switches, agreed last August to pay $713 million in stock for McData.

ON THE MARK

HOT TECHNOLOGY TRENDS, NEW PRODUCT NEWS AND INDUSTRY BUZZ BY MARK HALL



DAVID CLARK

Vista Shows Better Security Than . . .

. . . Mac OS X does. That's the view of Max Caceres, director of product management at Boston-based Core Security Technologies, which develops network-penetration testing software called Core Impact. Caceres says that Microsoft Corp. uses more advanced security techniques in Windows Vista than Apple Inc. uses in its operating system. Mac OS X "is still a little immature in terms of security compared to Vista," he contends. "On paper, Vista is more sound." As an example, Caceres points to the way Vista handles memory management. Information stored in RAM, he says, is "randomized, making it more difficult to exploit." That's not the case with the Mac software, according to Caceres. But, he adds, Apple's Unix roots, more frequent operating system release cycle and apparent indifference to backward compatibility make the Mac "well positioned to change its security model real quickly." Plus, he notes, security threats are a market share issue. As long as Windows dominates the desktop, he predicts, it will attract most of the malware.

CACERES: Vista is sound on security – on paper, at least.

But how long will that dominance persist? Mac unit sales jumped 28% last quarter, according to Apple, while PC sales languished in single-digit growth, according to everyone. Although the Mac's market share remains anemic compared with that of Windows, Apple's hardware is showing up more often in businesses. Mitchell Ashley, chief technology officer at Latis Networks Inc.'s StillSecure operating unit in Superior, Colo., says his company's Safe Access network access control software has always had to deal with Macs. But recently, that has changed from the occasional encounter to an everyday occurrence. "Today, it's a requirement for global network access control [tools] to manage Macs," Ashley says.

Security show may end in tears for . . .

. . . the bad guys. Heading to the RSA Conference next week in San Francisco? Expect to find enough new products to make a black-hat hacker weep in despair. Take PacketSentry 2.2, a software upgrade that San Jose-based PacketMotion Inc. plans to add to its security appliances early next month. According to Bob Pratt, PacketMotion's director of product marketing, the upgrade lets you get policy-based alerts about actions end users take on specific files. For example, you can be notified if anyone tries to delete .xls files in a given directory during the run-up to a quarterly financial report. The PacketSentry devices, which start at $45,000, also collect file access histories and store them in an Oracle database for audit uses.

Steve Roop, vice president of marketing at Vontu Inc., says that in a recent survey he commissioned Forrester Research Inc. to conduct, 52% of 151 security decision-makers at large companies reported that their organizations had lost confidential data via insiders using removable media. To help put a stop to that, San Francisco-based Vontu will add an Endpoint Monitor feature when Version 7 of its namesake software ships in late March. You'll be able to see who copied what information when, and where it went. Vontu can fingerprint content for protection, and Version 7 will let you keep track of double-byte code files with Asian-language data. Pricing starts at $25,000.

72% Said in a Forrester survey that data loss is the top threat.

Wasim Ahmad, vice president of marketing at Voltage Security Inc. in Palo Alto, Calif., says his company's product line "eliminates the whole rigmarole of complexity" around encryption tools. At RSA, the company will announce the Voltage Security Network, which businesses can use for on-demand e-mail encryption for $95 per user annually. Voltage Security also has boosted the scalability, authentication, management and reporting features of SecureMail, its flagship encryption software. And by summer, it plans to release an offering called the Data Protection System for companies that need to encrypt data for service-oriented architecture applications.

PacketMotion's appliances keep tabs on what users do with files.

Just WHOIS the owner of . . .

. . . that Web site? If you use the WHOIS command on the Internet, you'll likely learn the to answer to that question. But if the Internet Corporation for Assigned Names and Numbers (ICANN) follows the advice of the Electronic Privacy Information Center and other privacy advocates, it will adopt a new registration policy called operational point of contact, which restricts the data available online. Frederick Felman, chief marketing officer at MarkMonitor Inc. in San Francisco, thinks that would be a big mistake. Felman says ICANN should adopt a special-circumstances policy that permits only people with legitimate needs, such as homes for abused women, to mask their Web site ownership and contact data. He argues that WHOIS is a vital tool for quickly shutting down malware sites and protecting users from phishing attacks.

ICANN might restrict too much WHOIS data, worries FELMAN.

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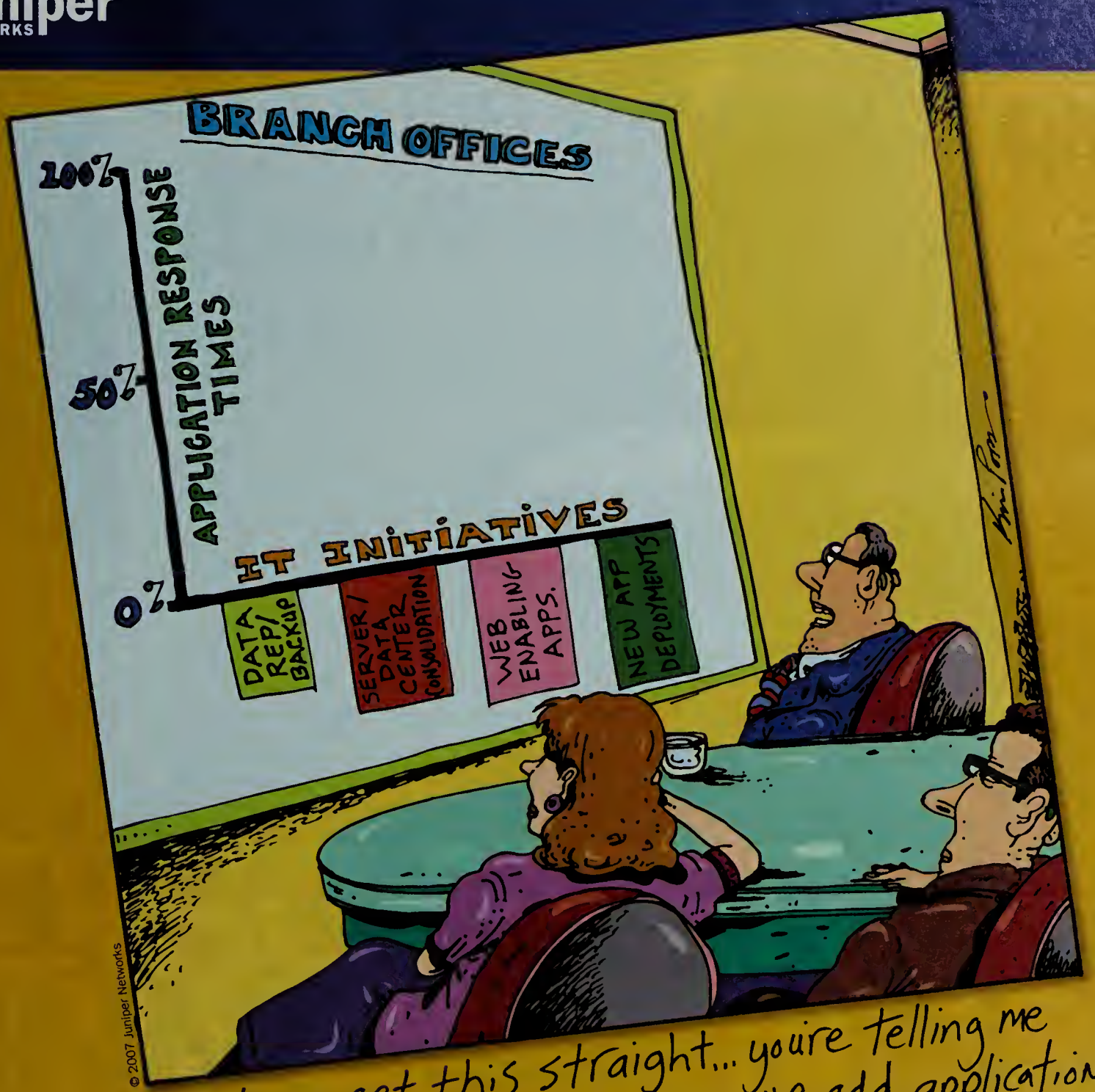

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Chicago Elections Board Faces Charges Over Breach

Lawsuits hit panel over distribution of discs with Social Security numbers

BY JAIKUMAR VIJAYAN

FOR THE second time since October, the Chicago Board of Elections is facing claims that it failed to adequately protect the privacy of voter data. And the board finds itself in court over the latest case, which has its roots in a 2003 fire that temporarily left workers unable to access its mainframes.

State and federal class-action lawsuits filed last week claim that the elections board acted negligently in late 2003 and early 2004 when it distributed more than 100 CD-ROMs containing the Social Security numbers and other personal data of more than 1.3 million voters to aldermen and members of local ward committees.

The 11-page state and six-page federal lawsuits ask that the board be ordered to recover the discs and erase the data on them. The lawsuits, which seek unspecified monetary damages, also call on the board to notify all the individuals affected by the breach.

"What we'd like to see is some sort of an endowment for people whose credit might have been damaged by this," said Nick Kefalos, the attorney, who filed the lawsuits. Kefalos works at Vernor Moran LLC, a Chicago-based law firm.

How It Happened

Jim Allen, a spokesman for the Chicago Board of Elections, explained that under Illinois law, elections authorities are required to make reports on registered voters available to candidates and local officials.

Typically, the data provided doesn't include the Social Security numbers of voters, Allen said. But, he added, the discs in question were created using data that employees downloaded directly from the elections board's mainframes after an October 2003 fire forced the Cook County Administration Building to be evacuated for an extended period.

"They had to do a massive download because they were not going to have access to the mainframes for several months," Allen said. The downloaded data included the Social Security numbers of more than 1.3 million of the city's 2.2 million registered voters, and the numbers were "unfortunately included with the basic information" sent to local officials, he said.

According to Allen, the elections board last Monday hand-delivered letters to the city's ward offices requesting that the discs be returned.

So far, he said, there has been no indication that any of the personal information has been used for fraudulent purposes. Nor have Social Security numbers been included on any discs distributed subsequently, Allen said.

The breach was brought to the board's attention last month by Peter Zelchenko, who is running for an alderman's seat in an election scheduled for Feb. 27.

Zelchenko, a member of the Illinois Ballot Integrity Project, also disclosed a major security breach on the election board's Web site in October. That breach not only allowed users to view the Social Security numbers of registered voters, but it also let them edit and delete the information.

The board has since fixed the problem and removed all but the last four digits of the Social Security numbers listed on its site, Allen said. It also hired Grant Thornton LLP, a Chicago-based auditing and business consulting firm, to help it with data security, storage and control issues.

Zelchenko said the newly discovered breach was "far worse" than the Web site problem. "There is now not one path to the information, but easily hundreds," he said.

Noting that the information on the discs also includes birth dates, phone numbers and the names of family members, he said, "You couldn't plan a more ideal package for identity theft."

A 2003 fire at the Cook County Administration Building led to the distribution of CD-ROMs containing voters' Social Security numbers.

Users See Potential in Lotus Apps, but Rollouts May Wait

BY TODD R. WEISS
ORLANDO

At its Lotusphere 2007 conference last week, IBM detailed upcoming software tools designed to enable corporate users to collaborate more efficiently by better tying together different streams of internal information.

Users interviewed at the conference generally agreed that the promised additions to IBM's Lotus product line could help improve their collaboration processes. But some said it might be a while before their organizations take advantage of the new tools.

For example, an IT administrator at an East Coast utility said its business units use different applications and systems, posing collaboration challenges. Processes could be improved by using some of the new features coming in Version 8 of IBM's Notes and Domino applications, said the administrator, who asked to remain anonymous.

The Notes 8 client is based on the Eclipse open-source development framework and will look like a native application on Windows, Macintosh and Linux desktops, according to IBM. The IT administrator said that should make the software "system-independent" while also making it easier for end users to access data.

But he added that his company's 20,000 users probably won't see the new tools for several years. The utility is still upgrading its systems to Version 7 of Notes and Domino and won't be ready for another upgrade right away.

New Capabilities

Key features in IBM's new collaboration tools

- **Notes 8:** Includes word processing, spreadsheet and presentation tools that support the OpenDocument Format.
- **Domino 8:** Lets users run applications written for earlier versions of Notes without having to make any changes.
- **Connections:** Enables companies to set up "professional networks" of employees for sharing information.
- **Quickr:** Supports content sharing via wikis, blogs, content libraries, RSS feeds and links to desktop applications.

Two Lotus Tools Debut

In addition to announcing plans to release Notes and Domino 8 for public beta-testing next month, IBM introduced two new Lotus products: an information-sharing tool called Connections, and a collaborative content-sharing program called Quickr.

Hugh Roddick, director of application development at Health Canada's client service center in Ottawa, said the various IBM tools could eventually offer major usability improvements to the government agency's 13,600 users.

Currently, many of the users are forced to rely on paper-based communication or "cobbled-together" electronic tools, Roddick said.

Health Canada has been testing Notes and Domino 8 for several months, and Roddick said the integration of new functionality, such as document-editing tools, into Notes will let users run fewer applications at one time.

Roddick added that Connections could allow Health Canada's in-house knowledge to be cataloged in a central place. And Quickr could enable users to run searches against 5,000 or so Notes document storage repositories, he said.

"One of the problems we're trying to solve is that there's too much information," Roddick said. "You've got all this corporate information, but it's in little silos."

But Geert Van de Steen, a Notes and Domino consultant at TechTeam A.N.E. NV in Zwijnaarde, Belgium, said his customers "would laugh at me" if he suggested they deploy IBM's new tools. "We are professionals," he said. "We don't need these fancy things."

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Continued from page 1

Vista

test machines this year — or on no PCs at all.

In several cases, the reasons extend beyond the typical issues that delay major migrations. High-profile new features such as the volume-activation and product-validation tools in Vista and the dramatically different user interface in Office 2007 are causing some IT managers to think hard about their upgrade strategies.

"The new UI presents a significant change-management issue we felt we couldn't absorb this year," said Charlie Ward, an enterprise architect at Duke Energy Corp. So the Charlotte, N.C.-based power company will delay a migration to Office 2007 until next year, Ward said, even though it's anxious to take advantage of improved collaboration capabilities between the desktop applications and Microsoft's SharePoint Server software. Duke Energy also expects that it won't start its separate Vista migration until 2008, Ward said.

Yancey Smith, Office group product manager at Microsoft, said the new Office user interface, which is called Fluent, was designed to be more intuitive. The company's customer research shows that 83% of surveyed users think they will need only two days to two weeks to learn the new interface, and 85% think it will improve their productivity, according to Smith.

More Training Needed

But IT managers such as Jim Prevo, CIO at Green Mountain Coffee Roasters Inc. in Waterbury, Vt., fear that their users will need more training than usual on Office 2007. Prevo said he was initially stumped by the simple task of opening a file when he installed a beta copy of the desktop suite.

"I'm a geek — I figure things out easily," he said. "Office 2007 is going to be a big problem for normal people unless we give them some training before they touch it." As a result, upgrading to Office 2007

> **Office 2007 is going to be a big problem for normal people unless we give them some training before they touch it.**
>
> **JIM PREVO,** CIO, GREEN MOUNTAIN COFFEE ROASTERS INC.

"isn't a 'slip it in over the weekend' kind of project," Prevo added. He said he expects that no more than 5% of Green Mountain's PCs will be running the new applications by year's end.

Other executives are struggling to find business drivers for migrations, especially if they haven't bought into Software Assurance, the Microsoft maintenance program that entitles users to product upgrades. There aren't "enough new features to create any ROI" on Office 2007, said Dale Frantz, CIO at Auto Warehousing Co. in Tacoma, Wash.

Many users cited traditional concerns about upgrading to Vista, such as the need to test applications and a desire to wait for bug fixes that will be in Microsoft's first service pack release. But a new twist with Vista is its Software Protection Platform technology, a set of built-in antipiracy and antitampering tools. SPP's software activation and validation mechanisms are making some customers uneasy.

"I understand it and why it's necessary. It's an unfortunate byproduct of dishonesty in the IT world," said Christopher Pesola, associate director of application services at Learning Care Group Inc. in Novi, Mich. But, he added, SPP "seems a little too complex, and I'm sure someone has already figured out a way around it anyway."

Microsoft has said that Vista must be activated and pass a validation test within 30 days of installation, or else the operating system will go into a reduced-functionality mode.

Volume-license customers have two activation options. Multiple Activation Keys can be used for individual computers or a group of systems that connect to Microsoft servers over the Internet or by telephone. The other choice is the Key Management Service (KMS), an internally hosted system for automatically activating PCs or laptops. A company must have a minimum of 25 Vista-based machines connected together to use KMS, and the PCs must be reactivated at least every six months.

"It simply complicates things for us without any quid pro quo benefit," said George Defenbaugh, manager of global infrastructure IT projects at Hess Corp. in Houston. "All the work is on our side; all the benefit accrues to Microsoft."

When Hess upgrades to Vista, it will use KMS, which Defenbaugh described as "the only reasonable answer for a global company with 5,000 client machines." But an upgrade won't happen until next year at the earliest, he said.

The activation requirement "is probably the biggest reason we are still considering not going to Vista," said Joe Hartman, an application development manager at HydroChem Industrial Services Inc. in Deer Park, Texas. "The whole process sounds like a nightmare." With only three tech support staffers, he said, any added burden could "really strain our resources."

MORE ON VISTA

- In this issue: Frank Hayes envisions a scenario illustrating why it might be a good idea to let one or two troublesome users become Vista early adopters. Page 42
- For full Vista coverage, including hands-on reviews, how-to articles and more, go to the Windows Vista A to Z page on our Web site: computerworld.com/07/vista.

Borland Set to Unveil New ALM Scheme, Testing Tool

BY HEATHER HAVENSTEIN

Borland Software Corp. today plans to unveil a new approach to its application life-cycle management business, called Open ALM, and to roll out a new product designed to provide real-time visibility and software quality metrics for each phase of the application development process. **Tod Nielsen,** *president and CEO of Borland, and* **Marc Brown,** *the company's vice president of product marketing, discussed the announcements in an interview with* Computerworld *last week.*

What is the philosophy behind Open ALM, and how does it meet the demands of Borland users?

Nielsen: A year ago, we announced our double-down [bet] on the ALM marketplace. Customers have a huge pain point with their software delivery processes. They want to turn software delivery into a managed business process instead of this chaotic thing they have going on now. Open ALM really articulates some of the core values we believe are important to customers. We want to make sure we are open to any particular process or tools process approach that they take. If they use any [Borland] ALM technology, they are not forced to target Windows, Java or anything else.

Brown: If we look at how organizations are doing software delivery, they're really struggling to have a predictable and managed process. We are making sure that our Open ALM platform supports any process or technology they want to use and the platform they plan to deploy their applications on.

Open ALM is really there to help automate third-party or open-source data collections to drive the horizontal metrics and measurements that organizations need. Today, organizations can't manage what they can't measure.

How will Borland's existing products be tailored to fit into the new strategy? Brown: We are continuing to build out the integration for all our products to support the life-cycle activities. [Our products need] to give organizations either a unified ALM report or dashboards so they can get those broader life-cycle views.

What do you mean when you say that the broader life-cycle view is kind of software development business intelligence? Brown: One of the reasons why people have not talked about business intelligence for software development is because many technologies [that are] used to automate those processes collect information, but the information is housed in a large range of disparate data islands. We're very focused on what the data being collected across the life cycle is. Once we understand that, then we can use data warehouses and virtualization technology to bring together the data that is being collected [throughout] the life cycle.

What is Gauntlet, the product that Borland is announcing this week? Brown: Our Lifecycle Quality Management [product] is very focused on addressing quality assurance across the software development life cycle. Gauntlet extends and is a complementary technology to that. It sits on top of a version control system, and it monitors the individual assets that are being checked in and out of the version control system. It is a way to automatically inspect an asset for a particular attribute like a security vulnerability or a standard code violation. Organizations now have a very good way to automate a number of the inspections they typically do manually today. If you do see a deviation, you can easily correct that in real time.

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GLOBAL DISPATCHES An International IT News Digest

Taiwan Relaxes Its Restrictions on China

TOKYO

TAIWAN'S GOVERNMENT will allow its biggest technology companies to invest in mainland China, but only after they agree to make equal or better investments at home, a government minister told reporters here last week.

"We won't restrict the investments between Taiwan and mainland China, but [we will] try to see how we can take advantage of the economic relations between the two sides," Jaushieh Joseph Wu, chairman of the government's Mainland Affairs Council, said at a news conference at the Foreign Correspondents' Club of Japan.

Late last year, Taiwan approved requests from local chip makers Powerchip Semiconductor Corp., ProMOS Technologies Inc. and Advanced Semiconductor Engineering Inc. to make investments totaling more than $800 million (U.S.) in factories in mainland China.

Those moves followed negotiations between government officials and each company. "When they are willing to put $100 in China, we are asking them, 'How much investment are you willing to put in Taiwan?' " Wu said. "They have to come up with some promise, and they have to write it down."

■ MARTYN WILLIAMS, IDG NEWS SERVICE

GLOBAL FACT

14M

Number of Chinese citizens who gained access to the Internet during 2006, bringing the total number of Internet users in China to 137 million.

SOURCE: CHINA INTERNET NETWORK INFORMATION CENTRE, BEIJING

33% Growth Projected For Indian Outsourcers

DELHI, INDIA

INDIA'S SOFTWARE and services exports are expected to grow by 33% to more than $31 billion (U.S.) in the fiscal year ending March 31, according to data released last week by the National Association of Software and Service Companies (Nasscom).

India's three largest outsourcing firms — Tata Consultancy Services Ltd., Infosys Technologies Ltd. and Wipro Ltd. — each reported strong revenue and profit growth for the quarter that ended Dec. 31, Nasscom noted.

The country is on course to achieve $60 billion in exports by 2010, the Delhi-based trade organization said.

Nasscom has projected exports totaling $18 million in IT services, including software development; $8.3 billion in business process outsourcing and call center services; and $5 billion in engineering services, research and development services, and product development work during the fiscal year.

Employment in the country's software and services sector is likely to reach 1.6 million by March 31, up from 1.28 million in the previous year, Nasscom said.

The organization did warn that the country must improve the quality of education and train more staffers in order to maintain the employment levels needed to reach the projected total.

■ JOHN RIBEIRO, IDG NEWS SERVICE

Outsourcers Unaffected By Bangalore Riots

BANGALORE, INDIA

OUTSOURCING COMPANIES here said they were mostly unaffected by rioting in the city earlier this month, although some took the precaution of rerouting staff transportation routes.

The riots, which started Friday, Jan. 19, began as a protest of the hanging of former Iraqi President Saddam Hussein and turned violent as Muslims attacked Hindu establishments.

On Sunday, Jan. 22, a Hindu mob retaliated against Muslims in the area. The rioting was confined to a volatile sector of downtown Bangalore where outsourcing and IT companies do not have operations, observers said.

"We are working as usual, and our operations were not affected," a spokeswoman at Bangalore-based Infosys said.

Staffers traveling to work at outsourcing firm iGate Global Solutions Ltd. were also largely unaffected because most arrived before rioters got to the streets, a spokesman said.

Most outsourcing firms offer transportation to work for their staffers, and many companies, particularly those doing business process outsourcing, have people working over the weekend. Many used alternate routes as a precaution during the riots.

■ JOHN RIBEIRO, IDG NEWS SERVICE

Dutch Prosecutors Seek Prison for Botnet Gang

LONDON

DUTCH PROSECUTORS have asked a judge to jail two men charged with a scheme they say may have infected more than 1 million computers with malicious programs.

Prosecutors are seeking a three-year prison sentence for one of the men and a two-year sentence for the other, said Desiree Leppens, spokeswoman for the organized crime branch of the National Public Prosecution Service in Rotterdam, the Netherlands. They also recommended that each pay €30,000 ($38,000 U.S.) in fines, she said. A judge will rule on the case on Jan. 30. The men were not identified.

Leppens called the effort the largest cybercrime case to be conducted in the Netherlands. During a one-day trial on Jan. 16, prosecutors said that at least 50,000 computers were infected by the two defendants, who are 20 and 28 years old. The pair used a program called Toxbot, a worm that can be used to gain remote control of a computer and log keystrokes, prosecutors said.

■ JEREMY KIRK, IDG NEWS SERVICE

HP Opens Research Laboratory in Russia

ST. PETERSBURG, RUSSIA

HEWLETT-PACKARD CO. last week opened a new research lab here. The laboratory will focus on information management research, said Beth Keer, director of the Information Services and Process Innovation Lab at the HP Laboratories operation. "There's a lot of need to do additional database research," she said. "In data mining and in unstructured data, there are challenges in understanding what you have got."

Keer noted that about half of Russian university students choose to study mathematics or science. "It's important for us to be where that talent is," she said.

Keer will supervise the Russian lab and will act as its director until a permanent one is appointed, according to HP. The company is also recruiting researchers for the new lab, which will ultimately employ about 25 people, Keer said.

HP's largest lab, in Palo Alto, Calif., employs about 350 people. Smaller research operations are located in Bristol, England; Haifa, Israel; Tokyo; Bangalore; and Beijing, Keer said.

■ PETER SAYER, IDG NEWS SERVICE

Compiled by Mike Bucken.

Briefly Noted

Hedy Holding Co. has signed an agreement to use Advanced Micro Devices Inc. microprocessors, ending the Guangzhou, China-based PC manufacturer's policy of using only chips from Intel Corp. Hedy this month brought out several new PCs based on AMD chips and plans to add AMD-based laptops later this year.

■ DAN NYSTEDT, IDG NEWS SERVICE

BlueScope Steel Ltd. in Melbourne, Australia, has awarded a four-year contract worth $480 million Australian ($379 million U.S.) to Computer Sciences Corp. to provide consulting, application development and support, disaster recovery, systems integration and end-user services over multiple platforms. The contract extends a relationship between BlueScope and CSC that began in May 2000.

■ DARREN PAULI, COMPUTERWORLD AUSTRALIA

China Mobile Communications Corp. last week agreed to purchase a majority stake in Paktel Ltd. in Islamabad, Pakistan, from Millicom International Cellular SA in Luxembourg. The deal, valued at $284 million, includes cash and debt payments for Millicom's 68.9% stake in the firm. The deal marks Beijing-based China Mobile's first foray outside of its home country.

■ DAN NYSTEDT AND JOHN RIBEIRO, IDG NEWS SERVICE

Jay Y. Lee has been promoted to chief customer officer at Samsung Electronics Co. In the newly created position, Lee, son of Samsung Group Chairman Kun-Hee Lee, will act as a bridge between Samsung and its most important customers while working to form alliances with current and prospective customers, the company said.

■ MARTYN WILLIAMS, IDG NEWS SERVICE

France Telecom SA this month moved to combine its 15 worldwide research centers into a single organization called Orange Labs. The network of labs unites research centers in France, China, Japan, Poland, South Korea, the U.K. and the U.S. France Telecom CEO Didier Lombard said the combined research unit will focus its work on telecommunications and so-called Web 2.0 technologies.

■ PETER SAYER, IDG NEWS SERVICE

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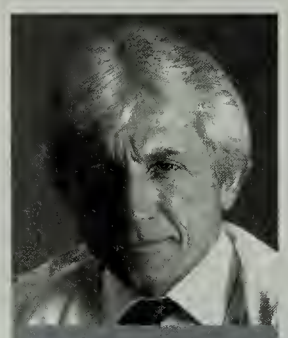
DON TENNANT

Giving a Chance

SOMETIMES it gets kind of depressing. Covering the stories you need to know about so you're up to speed on developments that could affect your job and the technology you use to do it can be a bit of a downer.

You didn't have to look very far down the list of news stories on our Web site last week to get a feel for what I'm talking about: "Storm malware shapes up as worst 'weather' in years," "Breach at TJX puts card info at risk," "Chicago Elections Board sued over data breach," "Don't fall victim to the 'Free Wi-Fi' scam." It was a fairly typical week with plenty of not-so-good news.

Yet something happened that set last week apart. Amid all the gloom, there arose a buzz in the newsroom about a story that was in production for this week's issue. "Have you read the Kiva story?" someone would ask. "Check out this week's cover," someone else would say. "Is that cool or what?"



DON TENNANT is editor in chief of *Computerworld*. Contact him at **don_tennant@computerworld.com.**

If you haven't read it yet and you could use a boost, turn to page 31 and read the story titled "Game Changer." It's about Kiva (Swahili for "agreement" or "unity"), a San Francisco start-up that uses Web technology to give people in developing countries a chance at a decent livelihood that they otherwise wouldn't have had.

The small band of game changers at Kiva has come up with a way to enable individuals like you and me to easily lend as little as $25 to hard-working people who are trying to make a go of a business venture. You can choose to help fund a farmer in Kenya who needs $700 for seed and fertilizer, or perhaps a woman in Ghana whose $625 loan will be used to expand her cornmeal dumpling business. In any case, the people you help are approved by a local microfinancing institution that you otherwise probably wouldn't even know exists. It's an amazing setup, and one that has inspired more than 26,000 people worldwide to become lenders since the nonprofit Kiva was incorporated just 14 months ago.

Interestingly, I've come to find out that there are IT leaders who are devoting their careers to nonprofit organizations that are engaged in this sort of microfinancing activity.

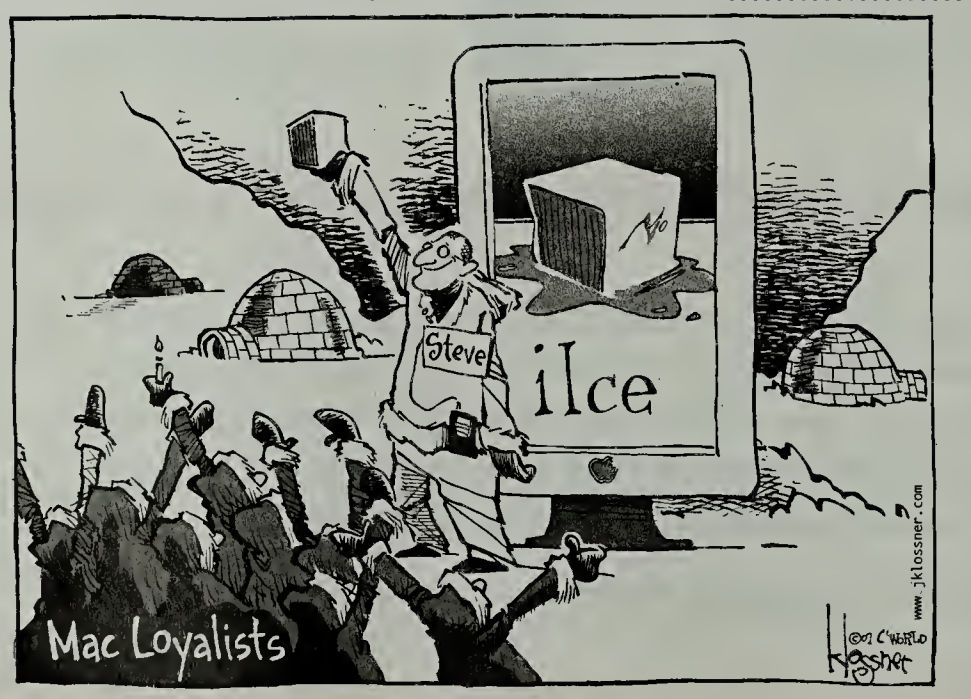
By sheer coincidence, a couple of weeks ago I received an e-mail out of the blue from Jiten Patel, CIO of one such organization — FINCA International in Washington. Patel was eager to make us at *Computerworld* aware of FINCA's mission, which he said is to "assist the underprivileged, the poorest of the poor in the Third World and developing countries to be able to stand on their own two feet" by means of microloans of $80 to $200.

"Most of the people we lend to happen to be women, which speaks volumes in terms of the impact that has on a child's mind when they see their mother, sister or cousin running a micro-enterprise," Patel said. "[That will] slowly break down social taboos, a very good side benefit."

By the way, as I was writing this editorial, I took a quick break and loaned $25 to a woman in Afghanistan named Rohena Faiz Mohammad who needs $300 to buy beans and peas to sell on the street. The write-up on Kiva's Web site noted that it's difficult for women in Afghan society to engage in a business like this and that Rohena is struggling to overcome that obstacle.

It took me about 10 minutes to make the loan. It was worth it. ▸

Don Tennant



PAUL LAMB

Us, Not You, for Person of The Year

"IS ANYBODY making technology and access to it for me, and not just for some rich kid?" I overheard a young student ask. At the time, I was in the classroom at Street Tech, a San Francisco Bay area technology training and job placement program for low-income and underserved adults.

The answer is complicated. Or is it?

Trickle-down technology is a fact of life in the U.S., just as are trickle-down employment, housing and wealth distribution. Thankfully, we as a nation believe in offering a safety net to keep people from slipping over the edge entirely. But we also harbor a competing set of beliefs that people get what they deserve and that working hard entitles one to certain "freedoms," like unlimited wealth accumulation.

PAUL LAMB is the principal of Man on a Mission Consulting and a founder of Street Tech (*www.streettech.org*). Contact him at **pauljlamb@gmail.com.**

What if technology could help us to move beyond a "to the victor go the spoils" mentality? What if we all had similar access to the tools for success in a world that is being rapidly flattened, as Thomas Friedman suggests, by technology changes? That flattening already has some welcome partners, like municipal and community wireless broadband networks that are attempting to offer free and low-cost Internet access to everyone.

Here are some additional things we could do:

Simple, affordable tools. While we have a $100 laptop in production for the developing world and breakthrough cell phone technologies being deployed to help entrepreneurs in poor rural communities overseas, many of our own poor are being

overlooked in the U.S. For example, a cheap mobile device could go a long way toward keeping a homeless person connected to social services, jobs and people in a position to help.

School- and community-based training. Our public schools, nonprofits, community centers and libraries are badly in need of technology training curricula and programs that support innovation and practical training for future jobs. Beyond supporting prison reform and expansion, for example, shouldn't we also be thinking about training as many inmates as possible for the 21st century workforce while they are incarcerated?

Community-based research and development. Beyond designing tools and Web 2.0 services for high-end consumers, there exists a tremendous opportunity for technology businesses to form community-based partnerships designed locally for the disadvantaged and disabled. This will open up new markets *and* encourage innovation on the ground.

Small-business development. Existing entrepreneurship training and microenterprise programs could be expanded to include Web training for new entrepreneurs and local merchants, utilizing a plethora of free and low-cost e-commerce tools now available. A virtual economic empowerment zone could be established to support struggling entrepreneurs, and co-ops for online advertising could be made available to local merchants to bolster local economic development.

Neighborhood home pages. In place of generic home or "splash" pages on computers and mobile devices, location-based community portals could be developed and managed locally to feature neighborhood events, activities, businesses, political issues and people. In this way, community and civic ties could be strengthened, new social networks formed and local businesses promoted.

Fortunately, there are already a number of good public and private resources to move the above opportunities along. These include foundations, university-based technology R&D programs, technology companies, community technology programs and a variety of new state and municipal digital inclusion task forces and broadband deployment committees.

But the fact remains that 30% of Americans are still offline, and even many who have some access are too far behind the technology learning curve for it to matter. Even in our most wired cities, many people do not have a computer and/or Internet access in the home; in San Francisco, more than 40% in the poorest neighborhoods don't. Yet, in a March 2006 survey conducted by the Full Circle Fund in San Francisco, 80% of low-income residents indicated that they would be interested in purchasing a computer for $300, and nearly three quarters said they would take advantage of free computer and Internet training classes if offered.

So if 2006 was the year when "You" were recognized as *Time*'s Person of the Year because of your technology-enabled capabilities, how about making 2007 the Year of Us by putting technology to even better use — leveling the playing field for everyone?

In so doing, we can finally have a good answer to the question posed by that young man.

WANT OUR OPINION?

More columnists and links to archives of previous columns are on our Web site:
www.computerworld.com/columns

READERS' LETTERS

Five Men Weigh in On Women in IT

DON TENNANT is concerned about the falling percentage of women in IT ["The Darkening Mine," Editorial, Nov. 20]. However, there's a very simple explanation, and one that few men would ever consider: On average, women are smarter than men, and thus more likely to see career disasters looming ahead. Ergo, women are abandoning IT so that they will not be square in the path when the next career disaster strikes, as it did when the dot-com bubble burst. No, I don't know what the next disaster is; if I did, I'd be a woman, wouldn't I?

Rich Tietjens
IT technician and training director, Oregon

THE PEOPLE on the "bought off" side of the equation (those with better money and conditions) think that it will cost them to share. Hence the kicking and screaming. The big secret is that diversity brings far greater value than the cost of letting it in.

That 12% differential is what we men get paid in lieu of working equally with women. It's the bonus for ignoring the thinking, experience and wisdom of half the human race. Our day-to-day lives, our jobs and the future of our industry will be profoundly better if we bring in those other insights and perspectives.

Frank Pinto
Davis, Calif.

I TEND TO agree with the reader who used the coal mine analogy. Not that IT can really be compared to such a dangerous and dirty job, but the hours one has to put into it are impossible to bear if you want to have a family. Most of the women I have seen succeed in IT were the ones who, for whatever reason, decided not to marry; the others had very strong family support. Who is to blame? I do not know, but I have worked in two different countries, and I have noticed that when a company can get away with overworking its IT employees, you see a lot of women leaving as soon as they can. Unfortunately, most of the U.S. is such a place.

Hilton Lima
IT supervisor, Miami

I AM A fourth-generation coal miner who, after 16 years, was forced to leave the mines due to an accident. I returned to college and sat across the aisle from my oldest daughter in Calc 1. I decided to major in computer science because I thought the industry could sustain me until retirement. I graduated in 1995 and have now moved to the top seat in my department, which is 50% female. Most would probably leave if they married; that's a taboo subject, though it's one that cannot be ignored by management. Women have traditionally been the ones to suspend work outside the home to raise the kids, and if they ever return, their skill set is antiquated. Another reason women are paid less? When a couple both seek jobs, the common path is that they will move to follow his job offer. The woman, left to find employment in the city of the man's choice, often has to take less pay than she might otherwise, or even employment in another field. This is not discrimination; her pay is less because she took what was available rather than moving to where she could obtain the most remuneration for her services.

E. Moore
IT manager, Altoona, Pa.

OUT OF 42 IT professionals that I manage, five are women, and they definitely are the cream of the crop. I would love to see more women in the profession, but the IT world being what it is, I wonder not why there aren't more of them, but rather why there are so many.

Guy Pisapia
Regional administrator IMS, Correctional Service Canada, Laval, Québec

Destroy the Data, Save the Hardware

CONCERNING THE story "Top Tips on Destroying Data on Your Hard Drives" [*Computerworld.com*, Dec. 20], please don't tell people to destroy perfectly good hardware and put valuable raw materials into landfills. Call a data recovery specialist and ask what he *can't* do to recover data. He will probably be happy to tell you the limitations of his service and what makes a truly inert drive. I don't believe you should advocate data security by the blunt-force trauma of a sledgehammer. Shredding plastic disks is OK, although even that should be left to the competent and careful. Burning, acid baths and melting just make a mess for future generations and wildlife.

Ken Lauderdale
Flight test engineer, Lexington Park, Md.

Common Sense

AGAIN, IRA WINKER'S common sense cuts through a lot of the irrational fears regarding the question of privacy vs. security ["Why the DHS's Automated Target System Makes Sense," *Computerworld.com*, Dec. 19]. Yes, we need to be wary of government, but I would rather have Big Brother looking over my shoulder than some nut case with explosive shoes sitting next to me. Just goes to show you, common sense ain't all that common. Thanks to Ira for being one of the uncommon ones.

Tom Barth
Milwaukee

One Job? No Red Flag for This Reader

IN THE ARTICLE "Five Tips for Résumés When You Can List Only One Employer" [*Computerworld.com*, Dec. 19], this situation is called a "red flag." But when I get a résumé from someone who has stayed with a company for many years, I see loyalty and a person likely to go the extra mile. In these times of people shifting jobs because of trivial complaints, getting the opportunity to hire a person who was with one company for many years seems like a chance to retain a loyal and reliable employee.

Lewis Talber
Portland, Ore.

COMPUTERWORLD welcomes comments from its readers. Letters will be edited for brevity and clarity. They should be addressed to Jamie Eckle, letters editor, Computerworld, PO Box 9171, 1 Speen Street, Framingham, Mass. 01701. Fax: (508) 879-4843. E-mail: letters@computerworld.com. Include an address and phone number for immediate verification.

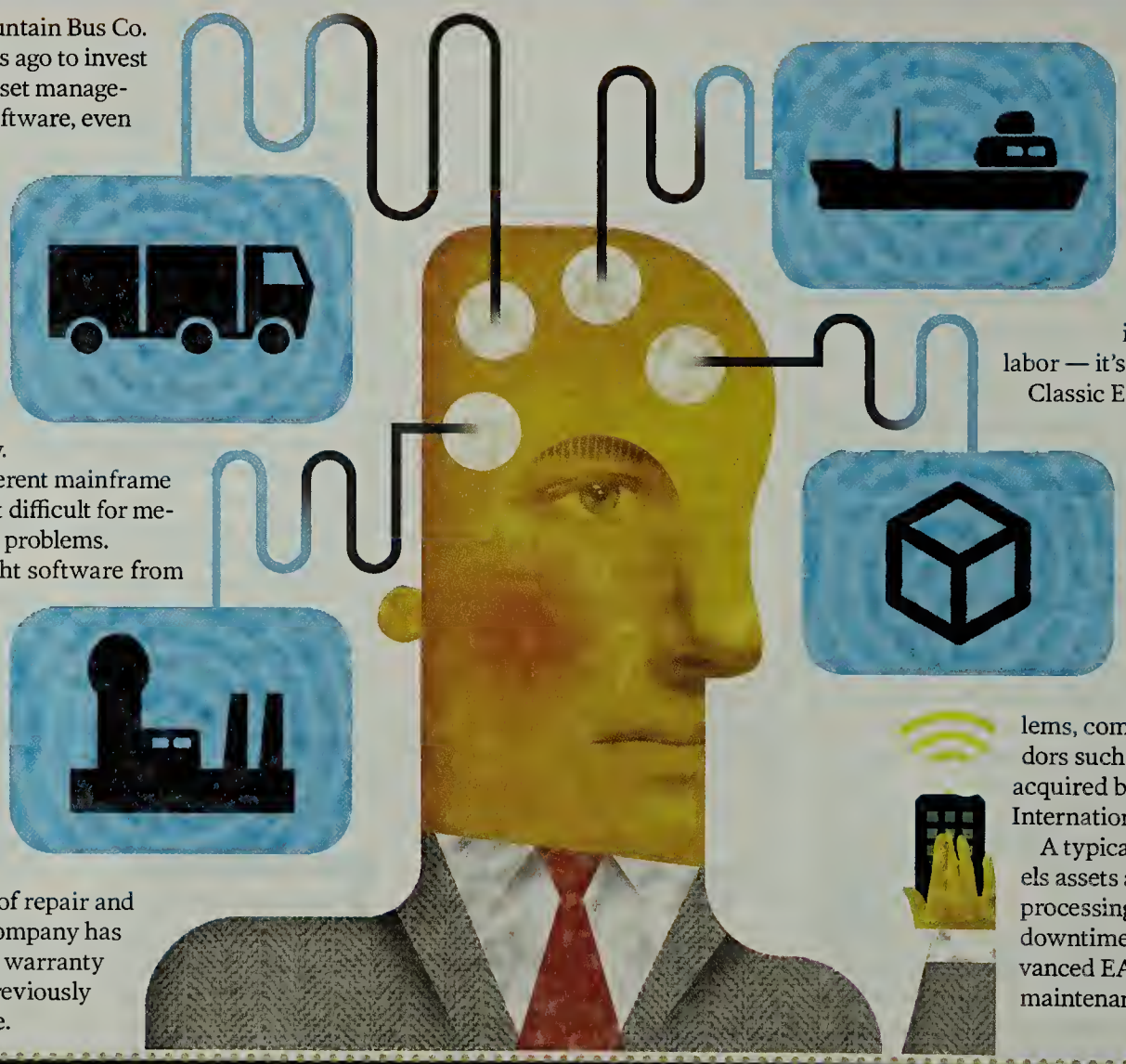
QUICKSTUDY
Color Temperature
Color temperature, a way of measuring the color quality of white light, is important in the design and use of computer monitors and digital cameras. **PAGE 28**

SECURITY MANAGER'S JOURNAL
Getting Certified and Just a Bit Certifiable
CCSP boot camp is grueling, C.J. Kelly reports. But off-site training is the surest way to block out distractions. **PAGE 29**

OPINION
It's Time to Forge Global Privacy Rules
Jay Cline says the time is ripe for a global privacy standard to replace the hodgepodge of rules that multinational businesses must cope with. The first step is to agree on what privacy really means. **PAGE 30**

The Age of Assets

Enterprise asset management isn't just for heavy industry anymore. Today, CIOs in many sectors can combine software, wireless networks and sensors to keep tabs on all kinds of assets. By Lauren Gibbons



GORDON STUDER/ILLUSTRATION

WHEN Coast Mountain Bus Co. decided 10 years ago to invest in enterprise asset management (EAM) software, even the executive who approved the purchase could not have foreseen how valuable it would turn out to be. Back in 1996, the Surrey, British Columbia-based company needed EAM to help track maintenance work orders for the fleet of buses it supplies to the Greater Vancouver Transportation Authority. Data was scattered across 12 different mainframe and PC-based systems, making it difficult for mechanics to get a handle on repeat problems.

So Coast Mountain Bus bought software from Datastream Systems Inc., now owned by Infor Global Solutions. The software tracks 1,100 buses and their more than 25,000 components. It also schedules repairs and links to GPS data for efficient dispatching of mechanics.

Cost-justifying the purchase was a cinch: Thanks to Datastream's central repository of repair and maintenance information, the company has already saved $1 million in parts warranty claims — "found money" that previously would have been left on the table.

But why stop at tracking buses? The company says it plans to expand its use of Datastream. "We can use it for buses, IT assets, buildings," says Jeff Vogstad, manager of client solutions at Coast Mountain Bus. "It not only tracks asset performance; it also tracks inventory, purchasing, requisitions, scheduling of labor — it's all done in the product."

Classic EAM has been used for decades in heavy industries such as manufacturing, oil and gas, mining and power generation to wring every drop of utilization out of production equipment. In those markets, the cost of unexpected downtime can reach millions of dollars per hour, and worker safety is at stake. To avoid such problems, companies bought software from vendors such as MRO Software Inc. (recently acquired by IBM), Datastream and Indus International Inc.

A typical EAM system catalogs and models assets and then automates work-order processing and the tracking of unexpected downtime and planned maintenance. Advanced EAM applications feature predictive maintenance tools, which check the asset's

Continued on page 26

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Continued from page 24

condition (or, more likely, the condition of one of its components) to determine if maintenance is required.

Now, the scope of EAM has widened to include cutting-edge applications — for virtually every industry — that use sensors to add remote monitoring capabilities to the mix. The railroad industry, for example, is experimenting with technology that can track the status and condition of goods in transit. Aircraft makers have started to use technology that can monitor the condition of each component of a jet engine, flagging wear on a bearing, for example, that could lead to disaster if not addressed.

EAM's broader reach is the result of an expanding definition of the term *asset*. "Almost anything could be an asset. There are financial assets, knowledge assets, people assets, fixed assets, capital assets," says Houghton LeRoy, an analyst at ARC Advisory Group Inc. in Dedham, Mass. "Assets are anything of value to you."

"It's all about the asset. You need to know where it is, what state it's in and whether you need to do something about it," adds Alison Smith, an analyst at AMR Research Inc. "Whether you're talking about a freight car, a building's HVAC system, a computer network, a factory floor, a container of oranges being shipped from Mexico to New York, or tissue samples going from a hospital to a lab, the bottom line is there is a need to track and understand the state of those assets."

Though EAM technology is unquestionably mature, its adoption has been hindered by a culture that settles for reactive, rather than proactive, maintenance, according to Patrick Connaughton, an analyst at Forrester Research Inc. Industries other than manufacturing are for the most part stuck in firefighting mode.

Asset management silos also present a problem. Most large EAM users have multiple departmental or localized EAM systems. "Even the largest companies are still trying to centralize the management of all their assets and get a centralized view," says Connaughton. Enterprise-level reporting of asset performance is the key to unlocking the real value, he adds. "It's about seeing a picture of your assets in their current state, in their current value, across all different locations and geographies," he explains.

Broader Applications

In addition to manufacturers, transportation/logistics providers were also early EAM adopters, using the software to track on-the-go assets instead of fixed assets. "There is overlap between EAM and what's typically referred to as fleet management and tracking," says Connaughton. Traditional EAM vendors have entered the fleet-tracking business as a natural extension.

"They're starting to cross over into telematics — the ability to monitor things like the temperature and vibration levels — thanks to sensors placed within a truck or a trailer," he adds. These systems can also be tied to GPS tools to track the locations of trucks.

This opens up the potential for interesting applications, especially in "cold chain" distribution, or the fresh-food supply chain. For example, if a lettuce supplier buys from growers in Nicaragua, it could use advanced fleet tracking to monitor the temperature in the body of the truck to be sure the logistics provider is meeting service-level agreements (SLA). If it turned out the trucks weren't kept at the proper temperature, the supplier would know in advance that the goods might be spoiled and would have time to make alternate plans. This could be a huge boon to an industry where wasted goods represent a very expensive problem.

Such monitoring could improve public safety, too, says Smith. In the not-so-distant future, she says, it may be possible to monitor trucks or storage facilities for the presence of bacteria and other undesirable organisms. Growers might be able to prevent problems like E.coli outbreaks.

The telecommunications industry is the second-biggest EAM user behind manufacturing, according to Connaughton. "They use it to track the light poles, the telecom infrastructure that is underground," he says. "They integrate the systems with [geographic information systems] so they can map out what the infrastructure looks like."

Asset management systems can also help maintenance crews do triage to identify the biggest problems.

The Clark County School District in Las Vegas went live last summer with an implementation of MRO Software's Maximo EAM package. The district uses Maximo to track building assets at 326 school facilities housing more than 300,000 students in 8,000 square feet of space. Public safety was the most pressing driver for buying the technology, according to Randy Shingleton, director of maintenance.

"If we have a fire or a major power outage, that is a critical outage. If the air conditioning shuts down in the middle of June when it's 120 degrees, the health department will shut us down. You want to fix that more than the backed-up toilet 20 miles away," says Shingleton. The district's previous homegrown mainframe system had no way to prioritize work orders. The old system also allowed a work order to go unnoticed if the person to whom it was assigned happened to be out of the office.

"The new system allows us to automatically forward [the work order] to someone else," he says. Maximo tracks how long it takes for the maintenance crew to respond to problems of all types. Level 1 problems, the most serious type, must be addressed within four hours. With Maximo, Shingleton's team can show that average response time has been much shorter than that. "It's the first time we have been able to prove that we are responding better than our SLAs [require]," he says.

Sensors on the Scene

Some of the most exciting new EAM applications are based on sensors for remote monitoring. In an industrial environment such as a warehouse, gas pipeline or oil drilling station, it would be impractical to use cable to connect sensors on each asset. Wireless is the only way to go for these types of applications.

Radio frequency identification (RFID) technology could be used in such settings, but it's not the only option. Mesh networking technology could also be used. A mesh network is a series of low-power "motes," or radio transmitters, that are connected wirelessly. "You take a load of these little sensors, and you distribute them in a particular area so they can talk to each other and decide how to communicate," says Smith. The oil and gas industry is an early adopter of mesh networking.

The potential for wireless sensor networks is limited only by the imagination. Connaughton cites a hospital doing a pilot project to manage intravenous machines and wheelchairs.

"They're setting up a wireless network in the hospital and tagging the assets with an RFID tag. They can track the asset and see where it is," says Connaughton. "There is so much redundancy in hospitals today. There are a lot of assets within a hospital that are not tracked closely. [Tracking] helps with optimizing the inventory levels in the hospital and as well as theft reduction. Both help cut costs."

Several decades after it was invented, EAM technology is being used far and wide, in environments that were unforeseen just a few years ago. CIOs contemplating a first step into the world of asset management should "look at it as more of an enterprise challenge as opposed to a one-off Band-Aid solution," advises ARC's LeRoy. "If a CIO is looking to become more efficient in his operations and improve the overall bottom line, EAM is one strategy that has a lot of impact." With the new wireless sensor applications, that is more true today than ever before.

Gibbons Paul is a freelance writer in Waban, Mass. She can be reached at lauren.paul@comcast.net.

An Application Sampler

Here are examples of ways that networks of wireless sensors can be used in various industries.

- **Track the location and condition of goods traveling on the nation's 1.6 million rail cars.**
- **Analyze real-time data from sensors located on city buses to predict equipment failures before they occur. The sensor data is transmitted via satellite.**
- **Monitor the location of IV machines and wheelchairs in a hospital.**
- **Check a commercial building's temperature and energy usage via a remote handheld device.**

GORDON STUDER

Maintenance Evolution

1. **If it breaks, they fix it.**
2. **They do scheduled maintenance on the asset** (such as changing the oil in a car every 3,000 miles).
3. **They do preventive maintenance based on knowledge about the condition of the asset as reported by a sensor.** This saves time and money by avoiding unnecessary scheduled maintenance.

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Color Temperature

DEFINITION

Color temperature is a way of measuring (in units derived from the Kelvin temperature scale) and describing the color quality of white light by comparing it to a theoretical black body heated to a specified temperature on the Kelvin scale. It's important in the design and use of computer monitors, solid-state displays and digital cameras.

BY RUSSELL KAY

QUICK STUDY

WHAT COLOR is white? From a physics point of view, white light is what our eyes see as a composite mixture of the full spectrum of visible light. As the sum of all the other colors, white can appear in myriad subtle hues, ranging from red to ivory or cream to yellow to blue. Yet our eyes tend to see any naturally bright light source that's not filtered as just white, with little sense that it includes more or less of certain parts of the spectrum.

In this day of relatively smart digital cameras and Photoshop image manipulation, it's easy to forget how much our brains depend on whites looking white to make all the other colors appear correct. Yet color matching, or color accuracy, is important for visual comfort. Every time we use a computer monitor, take a picture or look at a photograph, our brains adjust the colors we see so that they look the way we think they ought to. Color temperature is a useful way to describe the whiteness of white light, especially when comparing one light source to another.

Here's how two such seemingly disparate and unrelated concepts as *color* and *temperature* unite in a single descriptor: Let's create a very special light bulb by imagining a theoretical black object that's really cold: it's sitting at a temperature of absolute zero, 273 degrees below zero Celsius, -459.6 Fahrenheit. Because absolute zero is our primary reference, we'll use the Kelvin scale, which has the same intervals as Celsius but begins with 0 at absolute zero.

It doesn't matter what this black thing is made of because it can't be seen. We call it black because, by definition, black absorbs all light that hits it. If this body is in balance with its surroundings, it will radiate back the same amount and type of energy that strikes it. This state of equilibrium is called black body radiation. When the black body sits there at 0 degrees Kelvin with no energy coming into it, it's emitting no light, so it's not possible to see anything.

If we heat up this black body, we see it beginning to glow with a dim, reddish appearance. As the heat increases, the color changes, appearing first dark red then yellow, moving through the visible colors of the spectrum until it reaches blue and violet. As the object changes color, it also appears brighter, since more heat is being pumped in and a greater amount of energy is being radiated out while its color is getting bluer; we interpret this energy increase as brightness. At the middle and higher ends of the visible light scale, the body appears white to us; our eyes and brain can't easily distinguish subtle differences at such light levels.

When our black body reaches 2,800 degrees K, it looks like a normal incandescent lamp. At 5,000 degrees, the quality of its light is akin to a sunlit summer day. Using the color temperature scale, we characterize a typical tungsten-filament light bulb as having a color temperature of 2,800 Kelvin (for simplicity's sake, we drop the word *degrees* when talking color temperature). Note a real distinction here: We aren't saying the filament is operating at a temperature of 2,800 degrees K; we're merely describing the color quality of the light. Similarly, we've set the standard reference for daylight at 5,000 Kelvin, regardless of the sun's actual temperature.

Balance the White

That would be sufficient if all our light came from heating something that emits the entire visible spectrum, such as a burning match or a standard light bulb. But many light sources don't emit the entire visible spectrum. Some frequencies (and colors) are missing entirely, while other frequencies show large spikes.

Such nonblack body sources include fluorescent tubes, LEDs, and the sodium vapor lamps used outdoors.

We can't directly or accurately use color temperature to describe the light from such sources. Instead, we measure the relative amounts of red, green and blue light these sources emit and calculate a correlated color temperature.

The problem with this becomes apparent when we mix two dissimilar light sources. For example, take a room that is lit by "cool daylight" fluorescents (correlated color temperature 6,200K) and has sunlight streaming in through an open window (say this light has a real color temperature of 6,200K). To the eye, both light sources seem to have the same color quality, which is what the numbers imply. But when we take a photograph, we see that the parts of the room lit by fluorescent light look strangely greenish.

Why don't our eyes see this difference in the room itself? Because, like today's smart digital cameras, we have an "automatic white balance" feature that automatically compensates for such differences.

Kay is a Computerworld *contributing writer in Worcester, Mass. You can contact him at russkay@charter.net.*

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Adjusting the White Balance

Most modern computer monitors have provisions for changing the white balance of the displayed image. Somewhere on their adjustment menus is the option to choose a white balance such as 5,000K, 6,500K or 9,300K. Which one you use is a matter of personal preference, unless you need to match colors from different sources. For example, let's say you've created a layout on-screen using Adobe InDesign and want to compare it to a proof printed on paper. Most graphic arts production services have specialized viewing areas with color-temperature-controlled lights (typically 5,000K or 6,500K). If you use this along with a display monitor set for the same color temperature, you can be sure to accurately see any differences between the printed proof and the monitor image. Similarly, digital cameras, DVDs and Web graphics are normally designed for a 6,500K white point.

– RUSSELL KAY

Color Temps

The color temperature of various light sources – such as a candle flame or car headlights – can be plotted along a scale.

1,700K	2,000K	2,100K	2,800K	3,200K	3,400K	4,000K	4,000K-5,400K	6,500K	8,000K	12,000-20,000K
Match flame	Candle flame	Sodium vapor lamp	Ordinary tungsten-filament light bulb	Studio flood- and spot-lights	Cool-white fluorescent	Mercury vapor lamp	High-intensity xenon auto headlight	Standard setting for digital, video cameras	Hazy sky; average summer shade	Deep-blue clear sky

SOURCE: ADAPTED FROM WWW.SIZES.COM/UNITS/COLOR_TEMPERATURE.HTM

Getting Certified and Just a Bit Certifiable

CCSP boot camp is grueling, our manager finds. But off-site training is the surest way to block out distractions. By C.J. Kelly

SECURITY MANAGER'S JOURNAL

I RECENTLY ATTENDED CCSP boot camp. I was there for a very specific purpose. No, two very specific purposes. Like most people in attendance, I wanted to achieve the Cisco Certified Security Professional certification, but I also wanted in-depth training on the technologies that my staff deploys and I manage.

Technical boot camps are grueling. Classes normally begin at 8 a.m. and end at 8 p.m. We started at 7:30 a.m., worked through lunch and finished after 8 p.m. At the end of the training, I was physically exhausted, but my mind felt invigorated.

One thing that kept me going was thinking about how privileged I am to have had the opportunity to receive this level of training. Usually, technical managers aren't sent to technical training. But as I have said before, I believe that the best technical managers are both people-savvy and technically proficient enough to keep things on track. And I am very fortunate to work for someone who understands and supports that idea.

I hold several certifications in addition to my formal education, but in the past, I chose the self-study route. Boot camp was all new for me.

Almost Derailed

On the long flight home, I had time to think about boot camp vs. self-study using textbooks or online programs. I have always preferred self-study, which suits my particular learning style very well. I have an almost photographic memory, read very fast and grasp concepts quickly. I don't necessarily need interaction with other students or an instructor — in fact, I find it distracting.

But just before I went to boot camp, I completed an online training program to master the prerequisites for the CCSP, and distractions nearly derailed the process. I have no complaint about the quality of the online program. It included information presentations, online "step into the lab" demonstrations, flash cards and several variations of what the real test would be like.

My life is crazy busy, so even though I took several full days to do the online training from home, I still found myself constantly interrupted.

For most people, blocking off the time you need for online training is the biggest obstacle. You have to open up your schedule and set aside the time for training; trying to do it piecemeal as time allows just won't work. If this means closing your office door, do it. If it means working from home, do it. If it means going to the public library to get away from phones and pagers, do it. You have to manage the interruptions.

Some people drown when they're immersed.

This same advice holds true for self-study offline. And because you don't have an online program to guide you in what to study, you have to know what kind of materials to buy. For its own certifications, Cisco offers plenty of resources on its Web site. In fact, I ended up supplementing the online training with other self-study tools.

Camp CCSP

Boot camp is an immersion method. Distractions such as cell phones and pagers are discouraged. (I was surprised that laptops with Internet access were allowed.) There isn't much socializing. Most people went from hotel room to boot camp and back to hotel room again with very little in between. The schedule is physically draining; my lab partner was very late on about the third day, citing complete exhaustion.

Nonetheless, the training was excellent. The instructor was not only very capable, but also a security consultant in real life, with day-to-day experience in the technologies we studied. Far from being distracted by the other students, I found myself relieved that there were like-minded people around to discuss issues with.

I would have to say that boot camp did the job. Of course, it's expensive. Even though my state agency got a discount, the training for one person ran between $8,000 and $9,000, and that did not include airfare, meals or lodging. It did include vouchers for the five exams required to pass the CCSP certification test.

But some people drown when they're immersed. Your brain can easily get overloaded when you're trying to cram technical information into it for 12-plus hours a day.

I survived it, but boot camp isn't my preference. Would I do it again? Yes, and in fact, I intend to soon. So, managers who are considering training options for their employees should definitely consider boot camp seriously. For some people, it will be the only way to give the work at hand the necessary focus. (Others, like me, may do very well with self-study, so don't overlook that option.)

And shipping your employees off to expensive off-site training sends them a message loud and clear: You value them. Some managers worry that a big training investment could go to waste, since the employee could take his new skills and find a better-paying job. But my experience has been that making investments in people fosters loyalty. Expansive thinking on your part leads to expansive thinking on your employees' part. You want that.

Certification training raises another issue. There's a lot of talk that certifications don't deliver a lot of value. But in my mind, certification training, and especially security certification training, is a way of making sure that every aspect of security has been covered. It's the equivalent of requiring someone to have a college education as a job prerequisite.

Sure, certifications don't guarantee you anything. But they do give you a high level of confidence that the person sitting in front of you knows the basics and can perform them well. I agree that experience trumps certifications any day of the week, but I look at certifications as a quality seal. And that's good to have under any circumstances.

WHAT DO YOU THINK?

This week's journal is written by a real security manager, "C.J. Kelly," whose name and employer have been disguised for obvious reasons. Contact her at mscjkelly@yahoo.com, or join the discussions in our security blogs: **computerworld.com/blogs/security**

To find a complete archive of our Security Manager's Journals, go online to **computerworld.com/secjournal**.

SECURITY LOG

Spam Volume Just Keeps on Growing

Postini Inc. reported that almost 94% of all e-mail in December was spam. It said it blocked over 25 billion spam messages that month, up 144% from a year earlier. The company said viruses were also on the rise.

TOP BLOCKS
The top five viruses blocked by Postini in December:

nuwar	19.4M
netsky	6.4M
stration.gen	4.1M
downloader-arl	2.6M
mytob	2.1M

Meanwhile, Sophos PLC reported that the U.S. remains the largest source of spam.

SPAM CHAMPS
Top five spam-relaying countries, January 2007:

U.S.	22%
China	15.9%
South Korea	7.4%
France	5.4%
Spain	5.1%

MySpace Sues 'Spam King'

MySpace.com has filed a lawsuit against self-proclaimed "spam king" Scott Richter for allegedly blasting the portal with unsolicited e-mails. MySpace wants a permanent injunction to bar Richter and his affiliates from using its popular social networking site. Richter runs OptinRealBig.com LLC, an e-mail marketing company in Westminster, Colo.

Vt. Redacts SSNs

Vermont Secretary of State Deborah Markowitz said that to comply with a new state law, her office has removed from its Web site links that led to files containing Social Security numbers. Several states came under fire last year for revealing Social Security numbers on their Web sites.

BRIEFS

Kana Provides OnDemand CRM

■ Kana Software Inc. in Menlo Park, Calif., last week announced the release of OnDemand, a suite of customer service applications available as a software-as-a-service offering. The OnDemand package includes call center, e-mail response management, online chat and Web self-service capabilities. It's available now and starts at $125 per month per user.

F5 Adds Appliance That Delivers Apps

■ Seattle-based F5 Networks Inc. today will announce the Big-IP 8800 application delivery appliance, which provides up to 8Gbit/sec. throughput for applications and up to 6Gbit/sec. throughput for bulk Secure Sockets Layer traffic. It runs Big-IP 9.4, the newest version of the vendor's software. The Big-IP 8800 is available now, starting at $89,995, including software.

OpenPages Offers ITIL, Cobit Help

■ Waltham, Mass.-based OpenPages Inc. last week released OpenPages ITG software for managing IT governance and risks. The tool is intended to help companies comply with IT Infrastructure Library guidelines, as well as Control Objectives for Information and Related Technology, or Cobit, practices. Pricing wasn't immediately available.

Data Stewards Get Dashboard

■ Trillium Software, a unit of Harte-Hanks Inc. in Billerica, Mass., has introduced TS Insight, a data quality dashboard. The Web-based application monitors data quality statistics and performance indicators for customer name and address information, as well as supply chain, ERP and financial data. It can also be used to demonstrate the benefits of data quality investments. Pricing starts at $40,000 for a server license and 10 user seats.

JAY CLINE

It's Time to Forge Global Privacy Rules

WHENEVER I've mentioned to chief privacy officers the idea of having a single set of privacy rules for their companies to abide by worldwide, their response has been unanimous: Bring it on. Why? The legal and technical costs of complying with an expanding patchwork of state, federal and foreign privacy laws are mounting for multinationals. Having just one set of rules would improve the bottom line.

Data-protection commissioners from many world governments are singing the same tune. At a November conference in London, they issued a communiqué urging the United Nations to launch an international privacy convention toward this end.

You and I as customers and employees would also benefit from one set of rules that we could come to know and understand — instead of the vast array of obtusely worded privacy notices that we see on Web sites and find in our mailboxes.

JAY CLINE is a former chief privacy officer of a Fortune 500 company and now president of Minnesota Privacy Consultants. You can reach him at **cwprivacy@computerworld.com.**

It's hard to imagine a major constituency, outside of the Idaho and Michigan militias, that would be against the concept of a global privacy agreement, if it was properly worded. So, what's the holdup?

It all comes down to two questions that the U.S. and Europe answer differently: What does privacy mean? And is privacy an inalienable human right?

If two major blocs of the Western world can agree on the first question and just agree to disagree on the second, the stage will be set for serious negotiations.

What does privacy mean? The word *privacy* is nowhere in the U.S. Constitution, and Americans have had a continuously changing view of what privacy means. I see three major turning points:

■ In 1890, Chief Justice Louis Brandeis asserted that there's a right to protection from public disclosure of private facts.

■ In 1960, law professor William Prosser said there are four types of privacy violations: public disclosure of private facts, false publicity, appropriation of a name or likeness, and intrusion upon seclusion.

■ In 2006, law professor Daniel Solove offered four broader dimensions of privacy: information collection, information processing, information dissemination, and intrusion upon seclusion.

If you think that's complex, consider this: The European Union has eight privacy principles, the U.S.-EU Safe Harbor privacy accord has seven principles, and Canada and Australia have each developed 10 privacy principles.

Is it possible to bridge all of these differences into one common meaning of privacy? I think so. There's a tremendous amount of overlap among these lists. So I've been sharing a list of seven global privacy principles with my CPO peers over the past year, and it hasn't generated any major objection (see chart). The major industrialized countries are converging on the question of "What does privacy mean?" and the time is ripe to start forging a consensus.

Is privacy an inalienable human right? Europeans want the answer to be yes, and it's hard to blame them. After the experiences of World War II, where Europe's Axis-aligned governments exploited their access to citizen information to round up and execute opponents, you can see why Europeans want to go as far in the opposite direction as possible.

But Americans don't think privacy rises to the preeminence of an intrinsic human right — a right the government must recognize and cannot curtail. To say that we have a "freedom of privacy" and that the government can't stop us from being private would be one of the most ambiguous amendments to the U.S. Constitution we've ever had.

Every major constituency — citizens, businesses and governments — would benefit from a single set of global privacy rules. The question is, will the EU be open to compromise? ▸

SHARED IDEALS

Proposed Global Privacy Principles

These seven principles, which reflect the essential principles of the world's various privacy laws, could form the basis of a global agreement on privacy:

1. Notice: Present individuals with a privacy policy when their data is collected.

2. Relevance and retention: Require individuals to provide only data that is needed for the business at hand, and retain it for only as long as needed for that business.

3. Access and accuracy: Give individuals a way to securely access and correct their information.

4. Security: Protect individuals' information from unauthorized access within the collecting organization and any other organization or country to which it is transferred.

5. Choice regarding third-party sharing: Let individuals choose whether third parties should be allowed to access their information for analytical or marketing purposes.

6. Choice regarding direct marketing: Let individuals decide whether they want to be contacted for marketing purposes.

7. Enforcement: Appoint a senior executive to be responsible for annually assessing the organization's compliance with these principles.

MANAGEMENT

01.29.07

Buyer Beware
Are your IT vendors tied up in legal problems? If so, there's a real danger you can become entangled, too. Here's what to watch out for and how to protect yourself. **PAGE 34**

ADVICE
Managers' Forum
An employee nearing retirement isn't pulling his weight. Not only that, he's causing trouble. What's a manager to do? Paul Glen has some tips. **PAGE 35**

OPINION
IT, We Have a Problem! Part II
It's time for IT to stop playing the whipping boy, stand up and take credit for its role in corporate success, says Paul Ingevaldson. **PAGE 36**

GAME CHANGER

Kiva harnesses IT to revolutionize microfinance.

By Mary K. Pratt

PHOTO BY TIMOTHY ARCHIBALD

Yawa Aziaka, a hardworking but uneducated entrepreneur in Togo, needs a loan to buy chickens and feed to expand her poultry business. This will enable her to better support her four children and two foster children. She will repay the loan in 15 months. If you could change her life with a $25 loan, would you?

Well, now you can.

Kiva, a San Francisco-based start-up, is using technology to connect small-stakes lenders around the world with impoverished entrepreneurs in developing countries — a feat that's helping to change the nature of microfinancing and global giving itself.

Kiva's approach is straightforward. Entrepreneurs working with established local microfinancing institutions, or MFIs, put their business plans, financing needs and photos on Kiva's Web site. Investors from the U.S. and other affluent countries visit Kiva.org, choose which entrepreneurs to back and then finance the loans.

The organization, which incorporated as a nonprofit in November 2005, has already raised more than $2 million in loans from 26,000 lenders. The idea is simple, yet Kiva insiders acknowledge that it's only feasible with today's technology.

"Five years ago, it wouldn't have seemed possible," says Jeremy Frazao,

Kiva's director of technology.

"They're using the Web to shorten the [lending] cycle and increase the flow of information among people who wouldn't otherwise connect," says Peter Bladin, director of the Seattle-based Grameen Technology Center, part of the Grameen Foundation, a Washington-based nonprofit that promotes global microfinancing.

BEGINNINGS

THE IDEA FOR KIVA, which means "agreement" in Swahili, dates back to early 2004, when co-founder and CEO Matt Flannery was using e-mail and text messages to communicate with his wife, Jessica Jackley Flannery, while she worked in East Africa through the Village Enterprise Fund, a San Carlos, Calif.-based nonprofit that provides business training, seed capital and mentoring to people in that region.

Inspired by her experience, the couple tried to invest in microfinancing ventures only to learn that they were priced out of the market. (The minimum investments for MFI funds are generally $50,000 or $100,000.)

"We had seven businesspeople in Uganda we wanted to invest in, and we didn't find any organization that could help us do that," Matt Flannery says.

So the Flannerys helped themselves. In March 2005, Matt created a Web site that featured the Ugandans' photos and stories. The couple then used the Internet to solicit "shares" in those businesses from family and friends. The shares sold in one weekend.

Kiva was born, but it was just a side project at first. Matt kept his regular job as a computer programmer at TiVo Inc. until December 2005. Meanwhile, Jessica, who is now a second-year MBA student at the Stanford Graduate School of Business, spent a year raising money and researching legal issues related to their venture.

Around the same time, Frazao, a software architect, and his wife, Fiona Ramsey, an executive assistant at a real estate company, were spending a year traveling. They arrived in Thailand just months after the catastrophic tsunami of December 2004.

The couple sent e-mails to family and friends, asking for contributions for local entrepreneurs in need. In two days, they raised more than $3,000 via their PayPal account, some of which came from strangers to whom their original message had been forwarded.

"That's what made my mind start spinning about the ability to raise money over the Internet," says Frazao.

They returned to the U.S. in August 2005. Two months later, Frazao read about the nascent Kiva on a blog. "It just became clear to me that this is going to change everything," he says.

Frazao started helping Matt Flannery write code. Weeks turned into months, until Frazao finally became an official paid employee this past August. Ramsey became Kiva's community and operations manager.

Now Kiva's mission is to draw others into microfinancing. Visitors to Kiva's site see that Juliet Igunbor in Nigeria needs $500 to expand her beauty salon. Francois Segbessi Akpatou in Togo is asking for $1,200 to grow his auto repair business. Krum Nikolov in Bulgaria is seeking $2,000 to buy a professional coffeemaker and refrigerator for his snack shop. The entrepreneurs also say when they'll pay back the loans.

Web site visitors who decide to invest in a venture contribute online, going through a checkout process much like they would at a retail site. MFIs vet the entrepreneurs and disburse the funds, covering their expenses from interest they charge to the entrepreneurs. So far, there has been a 100% payback rate, but most lenders reinvest their money.

Kiva uses PayPal, a part of eBay Inc., to collect money from individual investors. PayPal reimburses Kiva for the transaction fees, essentially donating the service, which otherwise "far and away would be Kiva's greatest expense," Frazao says. Then Kiva wires the money overseas using San Francisco-based Wells Fargo & Co.

PayPal is not available in many developing countries, making wire transfers the most efficient way of getting money there, Ramsey says.

Kindred Spirits

www.donorschoose.org – Teachers in public schools submit proposals. Donors choose which projects to fund.

www.globalgiving.org – Donors fund grass-roots projects that appeal to their specific interests.

www.grameenfoundation.org – Small loans, financial services and technology help the poor – especially women – start self-sustaining businesses to escape poverty.

www.modestneeds.org – U.S. applicants seek money for short-term emergency expenses. Donors help determine which ones should be funded.

www.namaste-direct.org – Donors contribute to their choice of specific microcredit projects.

Funding the Funders

"The idea is to create something that's self-sustaining," says Fiona Ramsey, Kiva's community and operations manager. Here's how nonprofit Kiva gets money to pay for its routine operating expenses:

- **Large contributions from individual benefactors.**
- **Contributions from lenders.** Lenders at Kiva.org are asked at checkout to make voluntary contributions equaling 10% of their loan amounts to support operations. About 90% donate.
- **Grants and corporate gift-matching funds.**
- **Loan fees to microfinancing institutions.** This year, Kiva will start charging its MFI partners a 2% flat fee on loans to help cover Kiva's costs. (That fee is well below the 11% interest that lenders typically charge to microfinancing institutions to distribute loans.)

– MARY K. PRATT

Although aspects of Kiva.org feel like a retail site, it operates under financial and technical challenges that don't affect commercial ventures. One of the biggest is slow Internet access in the developing world, Frazao says. "The infrastructure in places like Uganda is so bad that it makes things almost impossible," he says. "Sometimes it was taking an hour to upload a photo."

Even when connections are available, there are problems, he adds. For example, some partners have the financial savvy needed to scout for potential entrepreneurs and set up the microloans, but they lack the necessary computer and Internet skills.

One partner in Africa had to run wires from the road to his office to connect with Kiva. Those wires were stolen within a day. Now he has a wireless connection, but that's even slower.

To get around poor Internet connections, Kiva is running a pilot program using 10 camera phones donated by Nokia Corp., supported by Multimedia Messaging Service and code that Frazao wrote. Partners can just take a photo, type a message and send them.

Back in the States, Kiva staffers face additional challenges. Among the biggest has been scaling the technology fast enough to meet the site's exploding popularity. In fact, a spike in interest after PBS ran a Frontline/World story highlighting Kiva in October caused the organization's servers to crash. (Ironically, the incident brought in $75,000 in donations from those who tried to gain access to Kiva.org and saw a message explaining the organization's technical difficulties and a request for donations for new servers.)

"The organic growth works for a while, but there's a huge difference between organic, grass-roots architecture and a business-ready architecture," Matt Flannery says.

Kiva staffers and volunteers are undeterred. They use open-source software whenever they can, Flannery says, a move that has kept costs down as they have continued to scale operations. And they recently outsourced their Web hosting to Media Temple Inc. in Culver City, Calif., because the service enables Kiva to handle dramatic spikes in Web traffic without incurring consistently high costs in doing so.

Media Temple, which has offered Web hosting services for the past eight years, launched a grid-based system in October that can scale "infinitely," says CEO Demian Sellfors. So instead of offering each client a site on a single shared server, the service is spread across hundreds of servers. Organizations pay a set cost for 1,000 grid performance units, with additional fees if they exceed that amount.

BUILDING

KIVA, WHICH STARTED WITH a printer and six personal laptops brought in by its workers, is expanding its operations. Last July, it finally acquired office space, two doors down from a laundromat in San Francisco's Mission District. Its budget is increasing from just over $125,000 in 2006 to $500,000 for 2007, says Chief Operating Officer Olana Khan. Frazao says Kiva might even buy him a new laptop.

Loftier goals include expanding the marketplace and bringing more lenders and borrowers together, says Matt Flannery. There's also a plan to pay investors back with interest.

"There is a huge potential to access capital from people like you and me," says Bladin. "Kiva is tapping into that. How big that is or how far you can go with that, I don't know."

Kiva staffers don't know either, but they're sure that the organization's impact will be significant. "We're just seeing the beginning," Frazao says. "Kiva is about to get really big."

Pratt is a Computerworld *contributing writer in Waltham, Mass. Contact her at marykpratt@verizon.net.*

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By Mary K. Pratt

Buyer Beware

AN IT VENDOR'S LEGAL ENTANGLEMENTS CAN SNARE ITS CUSTOMERS.

INFORMATION TECHNOLOGY manager Thomas Barce likes to make sure his vendors are unfettered by complex litigation. "I've been hesitant, if not unwilling, to work with vendors who have been in the public eye because of debacles," says Barce, regional manager of practice support at Fulbright & Jaworski LLP, a Houston law firm.

As an example, he cites vendors that provide electronic discovery processing. He several to choose from, so he easily dismisses the few that have been accused in lawsuits of failing to properly process e-mails and attachments.

Finding a vendor that hasn't had some sort of legal entanglement might be one of the hardest tasks in IT. The average U.S. technology or telecommunications firm faces 79 pending lawsuits, according to a recent survey of 311 U.S. companies by Fulbright & Jaworski.

Lawyers say IT executives shouldn't disqualify a vendor simply because of its involvement in legal action. They do, however, recommend that IT shops examine companies' records and take steps to protect themselves from legal action. "It's important to carefully assess the vendors they're considering aligning with," says Robert D. Owen, head of Fulbright & Jaworski's litigation group and co-head of the firm's e-discovery and information management practice.

Several attorneys offer some tips.

BEWARE THE SNARE. If you think a vendor's legal problems can't touch you, you're wrong. Some high-profile cases show just how nerve-racking such lawsuits can be. Just look at all the hoopla around last year's patent infringement case against Research In Motion Ltd., the Waterloo, Ontario-based maker of the popular BlackBerry. The case, brought by NTP Inc., threatened to shut down the entire BlackBerry community.

Moreover, patent infringement cases like that can involve not just the vendors accused of using others' technologies, but the users as well.

"It's not uncommon for people who own patents to threaten customers and say, 'Your vendor is selling a product that infringes my patent, and by using this product, you're infringing on my patent,' " says Tony Fitzpatrick, co-chairman of the intellectual property litigation practice at Duane Morris LLP, a law firm in Philadelphia.

Vendors are also frequently involved in disputes with clients or employees who have moved to the competition and have allegedly taken confidential information or client lists with them, says Fitzpatrick. "Occasionally, these cases can ensnare customers as well," he adds.

GET THE LOWDOWN. Learning about a vendor's legal problems takes some footwork, so not all IT shops include this step when picking suppliers, says James G. Gatto, the national intellectual property section leader at San Francisco-based Pillsbury Winthrop Shaw Pittman LLP. But they should, he says, adding that a company's IT group and legal department should together examine a vendor's history in this area.

"Certainly, it's wise to ask about whether the vendor has any pending legal problems, whether actual lawsuits have been filed or have been threatened," Fitzpatrick says. Good sources of this information include LexisNexis CourtLink, which provides information on pending litigation in courts throughout the U.S., and reports published by The Dun & Bradstreet Corp.

ANALYZE THE DETAILS. Just knowing that a vendor has litigation pending isn't enough information to make smart decisions. "People bring lawsuits all the time, whether they're meritorious or not. So companies should look at the type of litigation," says Alan N. Sutin, chairman of the national technology, media and telecommunications practice at Greenberg Traurig LLP, a law firm in New York. "If there are a high number of litigations that center around failure to perform or litigation surrounding issues such as security breaches or confidentiality or privacy concerns, those are very relevant."

> When you see a pattern of activities, that's when the antennae should go up. Actually, that's when you should run away.
>
> JAMES G. GATTO, ATTORNEY, PILLSBURY WINTHROP SHAW PITTMAN LLP

Barce says he wouldn't discount a vendor that is facing litigation over a disputed trademark, but he wouldn't work with one facing claims that its products didn't work as promised.

Gatto goes a step further. He contacts people involved in litigation to learn what happened to trigger it. If the cases are "just routine business disputes," that's one thing, he says, but "when you see a pattern of activities, that's when the antennae should go up. Actually, that's when you should run away."

INVOLVE COUNSEL EARLY. Compiling and analyzing all this legal information is a big task, so don't go it alone, Sutin says. "One common mistake that companies make is involving lawyers way too late in the process," he says. That's particularly true when companies hire vendors through a request for proposal process where the RFP fails to include terms about contractual protections and disclosures of past activities.

"The important thing," Gatto says, "is to pick your partners well, do your research well and make sure you have both business and legal people involved in assessing the issues."

Pratt is a Computerworld *contributing writer in Waltham, Mass. Contact her at marykpratt@verizon.net.*

JUST THE FACTS

79 **Number of lawsuits** the average U.S. technology or telecommunications company currently faces in U.S. courts.

$11.8M **What the typical technology company spent on litigation in the past year.** (This doesn't include verdicts or settlement amounts, only fees related to litigation.)

54% **Percentage of telecom/technology companies** that initiated one or more $20 million-plus lawsuits in the past year.

28% **Percentage of telecom/technology companies** that expect their pending caseloads to increase next year.

Base: 311 corporate counsels at U.S. companies

SOURCE: 2006 LITIGATION TRENDS SURVEY CONDUCTED DURING MAY AND JUNE 2006 BY BUSINESS DEVELOPMENT DIRECTIVES FOR FULBRIGHT & JAWORSKI LLP

Protect Yourself

Even if you've done your due diligence, there's no guarantee that your vendor won't find itself in litigation – or, worse, drag you into it. Here's how to protect yourself.

■ **Seek indemnification.** A provision requiring the vendor to indemnify you in case of any legal challenges is "probably the best and most basic protection you can get," says Tony Fitzpatrick, co-chairman of the intellectual property litigation practice at Duane Morris. With that in the contract, if a company claiming patent infringement on a software application sues both your vendor and you (as the user), your vendor must cover the cost of defending you against the claim as well as any losses or disruptions your company suffers.

■ **Consider insurance.** Indemnification has limits, says James G. Gatto, the national IP section leader at Pillsbury Winthrop Shaw Pittman. For instance, a claim of patent infringement might not arise from the vendor's product but rather from how you, the user, customized it. That could leave you facing all the costs of litigation and any settlement or judgment against you. Patent infringement insurance policies would cover the costs of legal action and damages, Gatto says.

– MARY K. PRATT

MANAGERS' FORUM

WITH PAUL GLEN

ADVICE

Welcome to the Managers' Forum! My goal is to provide an opportunity for lively discussion on the art and craft of management. I'll do my best to answer your questions, and there's room for your responses as well. Please send your questions, comments and critiques to me at management@paulglen.com.

Q I have an employee who is near retirement, and his focus at work is not what it used to be. He is a very smart, senior-level technician who once could be relied upon to get things done and done well. Now I feel I need to manage him almost to the micro level: Did you see the e-mail? Is that done? Where does this stand? etc. Since he is a senior-level guy, I don't feel this is a good use of my time, and I'm sure he's not enjoying it either. In addition to "missing" the e-mails, he's getting belligerent in meetings, especially around one topic where he is not in agreement with the decision that was made. Any insight on how to manage this situation would be greatly appreciated.

When driving, we rely on the fact that when we press on the brake pedal, the car will slow and stop. We trust that a chain of mechanical or electronic events will invariably follow that initial impulse and that the entire system will behave predictably. It's no accident that movies and TV shows often resort to failing brakes as a plot device (no matter how tired it may be). That fear of the failure of reliable levers of control is something we can all relate to.

As managers, we often make the same assumptions about the levers of organizational control at our command — that they are as predictable and reliable as a brake pedal. And similarly, we fear the failure of those tools.

Traditional methods of keeping subordinates in line or on board usually relate to fear or greed. When we're faced with a recalcitrant person, a good percentage of the approaches that we think of involve manipulating these base emotions. Employees fear punishment and humiliation, so if we can credibly hold the threat of dismissal, demotion, public shame or an obstructed career path over their heads, they are likely to toe the line no matter what they really think or feel. They'd do the same if we offered the dream of future riches, promotions or power.

But when employees no longer look to the future with anticipation or trepidation, these offers and threats become powerless, and managers feel terrified by the breakdown of control. So end-of-career employees can offer special challenges.

Often, you either can't or wouldn't consider firing them. They are protected by union rules, seniority systems or the tacit threat of an age discrimination lawsuit. And even if you could fire them, it seems wrong to ignore a history of contribution, even if their current production isn't up to previous standards. Not only would it be disrespectful to the individual involved, but it could also demoralize others who look forward to a long career at the company.

So, What to Do?

First, ask yourself, Why is this person suddenly acting out? Something is going on emotionally to lead to this change in behavior. It may have something to do with the work that he's been assigned or the decisions that were made, but my guess would be that it's probably not.

I'd say this is probably a reaction to his pending life change. If the employee has excelled at his craft, a great deal of his personal identity is wrapped up in being technically competent and producing results. He is used to being an important part of a group of peers. He is used to being respected for his abilities and contributions.

All of this is about to be stripped away from him, and that's probably somewhat terrifying. In order to disengage from a lifetime of work and identification with his role, he may need to construct a reality in which work is a terrible place that he must escape from, not a setting where he feels a sense of pride and accomplishment. He may need you to be a tiresome, overbearing nag in order to justify leaving it all behind.

He may also be suffering from a bout of bitterness or disappointment. He may be feeling that he hasn't accomplished what he set out to do with his career. He may not like a future without technical problems to solve or things to accomplish.

I think that his situation calls for a sympathetic treatment. This sounds like a person who deserves the gratitude of the organization and a graceful exit.

Sit down with him and outline your dilemma. Let him know how much his contributions and years of service mean to you and the company, and how much his continued contributions will mean. Tell him that you feel uncomfortable micromanaging someone of his experience, ability and maturity. Ask him how the two of you can best work together in the time he has left.

If he responds well, respect his wishes as much as possible.

If he responds badly — either belligerently or with a denial of the problem — you have your answer. You are unlikely to bring him around. In that case, you will probably have to isolate him somewhat in order to limit the damage he can do to projects or the morale of his peers while his career winds down. ▸

READERS TALK BACK

More on Floating An Idea Upward

Hi, Paul,

I appreciated your advice about how to float an idea upward, but what can you do when the guy at the top is too pigheaded to listen to reason – even when you have most of the executives on your side? – K.A.

When a leader is beyond reason, it becomes very difficult to convince him of anything. If building a coalition of peers proves insufficient, there are probably only a few options.

1. Wait it out. It may be possible to just wait until the correctness of your position becomes undeniable.
2. Resign. Often, if you can't in good conscience follow your manager, you may have to leave either your position or the organization as a whole.
3. Foment a coup. If what the manager is doing is very damaging to the organization, you may want to try to get the manager removed. (Note that this is a very high-risk strategy and should be approached extremely carefully.)
4. Stop caring and just retire on the job. Just kidding. This is bad for everyone involved. – P.G.

Hi, Paul,

When reading your advice for business managers to spend time within IT, I was considering doing the opposite. Should IT managers spend some time outside of IT as they climb the ladder? I feel I would greatly benefit from better understanding the business side if I did that. – C.X.

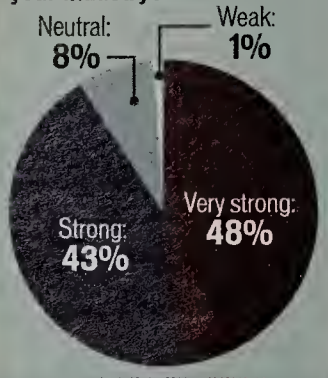
I'd say that it really depends on the path you want your career to take. In general, I think that time in the business unit is always helpful, but if you want to stay purely technical, it is probably of somewhat lesser value than if you want to go into client liaison work or managerial work.

Regardless, spending time in the business unit is a great idea – as long as it is not so long a tour of duty that you lose your connection to the technology. – P.G.

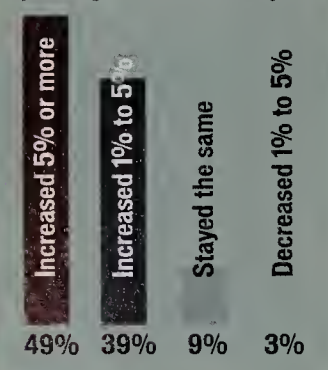
QUICK HITS

CIO Confidence

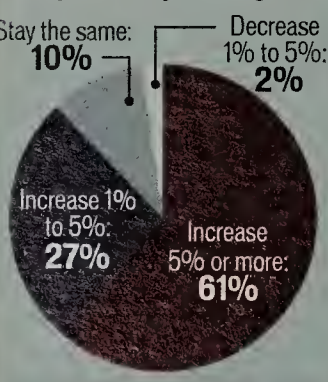
Which best describes the current business climate for your industry?



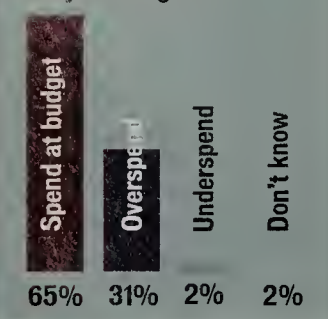
How does your current IT spending compare with your spending at this time last year?



How will your IT spending three business quarters from now compare with your budget?



Looking ahead to the end of the year, how will your actual IT spending compare with your budget?



Base: 115 CIOs at North American companies, polled in December 2006

SOURCE: FORRESTER RESEARCH INC., CAMBRIDGE, MASS.

PAUL M. INGEVALDSON

IT, We Have a Problem! Part II

IN MY NOV. 27 COLUMN, I described my experience teaching an MBA class at a local university. The article portrayed my frustration over my inability to convince the students of the value of IT and the need to understand how to effectively work with IT to achieve top-quality systems for their businesses.

I received a lot of e-mail responses. One writer commented, "What IT still doesn't understand is that Nick Carr was right! IT is an infrastructure service."

A CIO wrote that when he talked to his son, a recent college graduate, about an IT career, his son responded, "Dad, I wouldn't think of IT as a career. Don't you know everybody hates IT?"

A third reader, from Australia, said, "I wait for the day when IT is as mature as the automotive industry and all a user needs to know is 'how to drive,' how to buy what they need and how to ring someone to service or fix their IT stuff."

PAUL M. INGEVALDSON retired as CIO at Ace Hardware Corp. in 2004 after 40 years in IT. Contact him at **ingepi@aol.com**.

As I see it, these comments indicate that there are people with a range of opinions out there who fail to comprehend the incredible opportunities that exist for companies if they properly position and use IT to advance their businesses.

I started in IT more than 40 years ago. At that time, automobile manufacturers didn't use robotic systems to build cars. Paint manufacturers didn't use process control systems to ensure a high-quality product. Retailers didn't have point-of-sale computer systems tied into back-end inventory management systems. Retailers and manufacturers didn't use sophisticated inventory replenishment systems to minimize inventory requirements. The PC hadn't been invented, and online systems were just beginning to be developed.

This list could go on and on. The IT departments within companies over the past 40 years have literally revolutionized how business is conducted around the world. Just look around. Almost all knowledge workers spend their days in front of terminals doing their jobs. And this doesn't even begin to discuss how the Internet is changing the way companies go to market.

Yet my respondents, like the college graduate, say everyone hates IT. I find it very ironic that we agents of change are held in such low regard across the business spectrum. I know this isn't a universal feeling in all companies, but I have a sense that it is more common than we in IT would like to admit. Suffice it to say one would expect that a profession that brought so much change would be held in much higher regard rather than experience the love-hate relationship it often does. Perhaps this very mission to bring change to internal operations is the cause of the bad feelings. People don't like change, and that's what we bring.

This is why I think we have a problem. Instead of honoring IT for improving the operations and competitive advantage of our companies, executive management often tries to cut our budgets, reduce our staffs and outsource our activities. Then it's quick to hire consultants who always have a "better" solution than what the internal staff is offering. Often, instead of retaining a highly motivated staff that has the potential for great innovations, we are left with a demoralized maintenance staff that is pushed around by consultants. This is certainly not a recipe for success.

IT management must rise to this challenge and quit giving in whenever the budget-cutters target IT as the solution to annual budget shortfalls. We must win the argument that our costs ultimately improve the expense ratios within the user departments. We must win the argument that a talented, motivated and skilled IT workforce is needed if we are to bring innovation to our company's offerings. We must force our senior executives to better understand the unique role of IT in bringing competitive advantage to our businesses. And we must convince all our users that by working together with us in systems development, we will develop better, more aligned systems.

It's a tough job and probably the most important one for the CIO and the CIO's senior staff. They must continually show that they understand the business and must also document the contributions made by the IT department. IT must position itself to be the technology innovators of the future. By doing this, IT will ensure itself a place at the table and will continue to challenge the company to move forward in an aggressive manner. If we fail to do this, we run the risk of becoming the irrelevant utility envisioned by my reader from down under, and our companies will pay the price in the long term.

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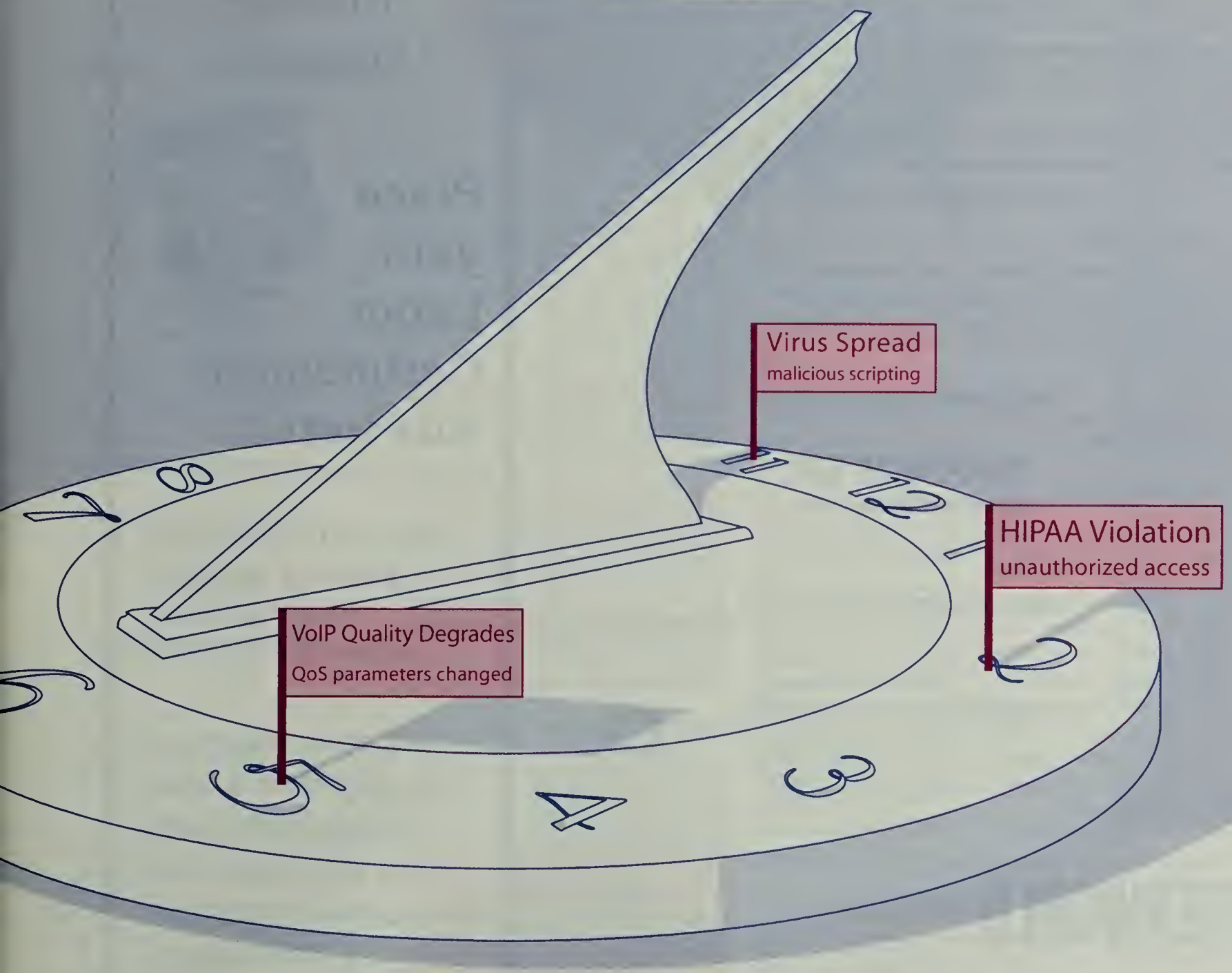

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Thomas Hoffman (845) 988-9630

Julia King (610) 532-7599

Robert L. Mitchell (508) 820-8177

Carol Sliwa (508) 628-4731

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CONTRIBUTING EDITORS

Jamie Eckle (617) 596-1873
Opinions, features

Preston Gralla preston@gralla.com
Networking/Internet

David Haskin dhaskin@earthlink.net
Mobile & Wireless

CONTRIBUTING COLUMNISTS

Michael Gartenberg, Paul Glen, John Halamka, Thornton A. May, Bart Perkins, Virginia Robbins, Bruce A. Stewart

CONTRIBUTING WRITERS

Mary Brandel, Stacy Collett, Russell Kay, Mary K. Pratt, Drew Robb

TELEPHONE/FAX

Main phone number (508) 879-0700
All editors unless otherwise noted below
Main fax number (508) 875-8931
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BI Value

manage its supply chain and monitor corporate performance. Yet Stone said he is still asked by top executives for a specific return on his BI investment.

At the same time, BI has become so critical to Lowe's that the home improvement retailer is building a new data center in San Antonio, in large part to back up its Teradata data warehouse and BI applications from McLean, Va.-based MicroStrategy Inc., he said.

"In the end, you're likely to be faced with some form of 'proof' question," Stone said during a keynote presentation at the MicroStrategy World 2007 user conference held here last week. And, he noted, "definitive proof is hard to come by."

For example, several years ago, Lowe's used its data warehouse and BI tools to help solve a problem with collecting fees for delivering products to customers. Payments for deliveries increased by $30 million in the year after the company first started using the tools to find out which stores weren't collecting the fees, Stone said. "This is an example of what BI is adding to the bottom line," he said.

Still, the CEO at the time asked Stone whether he could definitively link the bump in collections to the use of BI. "There is no silver bullet, [but] if you continue to deliver value, the funding always seems to inch its way back to your budget," Stone said.

Lowe's has several new BI projects under way, including one to identify fraudulently returned products. Stone said these initiatives all demonstrate the value that BI brings to the company.

Lowe's has also started using BI technology to track 50 million items in its 1,400 retail stores against billions of transactional records to plan inventory levels and analyze the effectiveness of the 4,000 to 6,000 quantity-discount programs Lowe's has in place at any one time, Stone said.

ROGER BALL

Lowe's CIO STEVE STONE notes that when it comes to financial returns on BI technology investments, "definitive proof is hard to come by."

Overall, the company uses the BI tools to create 170,000 reports per week for internal users and for personnel at almost 1,000 of its suppliers, he said.

Paul Wolters, technology manager of BI at Kansas City, Mo.-based Hallmark Cards Inc., said the company uses MicroStrategy analytic tools for several critical applications, including one that provides data for automatically replenishing stock in its 460 stores.

Still, Wolters and his team must continue "prospecting" to highlight the value of BI to corporate managers, he said. Prospecting, Wolters said, means dispatching internal BI specialists to all areas of the business to proactively identify pain points in employee processes and come up with BI-based solutions to the problems.

"If I can come up with a solution that helps [an employee] understand where his pain is and what he can do about it, that is powerful," he said. "We try to use that as a marketing tool internally."

Even with those efforts, Wolters said he still has to prove the benefits of BI to his CIO and even to other IT employees. "We have spent a lot of time evangelizing BI to the IT folks," he said. "They still are in the mind-set that BI is just reporting."

Ted Bross, associate director of administrative information services at Princeton University, said that though he knows that the university's Cognos BI tools have made life easier and better for users, he can't easily quantify those benefits for university officials.

"We would like to think that in time, we will be able to demonstrate the value of BI to our university executives, but we're not there yet," Bross said. "Positive feedback from faculty and staff make us feel like we are on the right track."

Proving BI's tangible value has not been a problem for all companies, however.

For example, after Corporate Express Inc. started using MicroStrategy's BI tools, it was able to cut costs by eliminating 31 jobs that were dedicated to running Microsoft Access BI reports, said Matt Schwartz, director of business analysis at the Broomfield, Colo.-based office supply company.

Corporate Express also uses MicroStrategy data mining tools to predict potential customer turnover, and this year it will start using BI to provide customers with online access to reports detailing how much they spend with the company.

Schwartz noted that the lack of that capability in the past prompted one client, financial services firm BB&T Corp., to jump ship to a Corporate Express competitor. Therefore, he said, adding the capability "was a very easy sell to our CEO." ▸

Lowe's, Nordstrom Expand Infrastructures to Support BI

LAS VEGAS

THE GROWING USE of business intelligence technology is beginning to strain some corporate IT infrastructures, according to some users.

For example, Lowe's this month completed an installation of 3,000 AIX-based IBM servers to better handle spikes in user demand for access to the MicroStrategy BI tools it uses.

The MicroStrategy tools previously ran on Windows-based systems, CIO Steve Stone said in an interview at the MicroStrategy user conference here last week.

In addition, Lowe's is building a second data center in San Antonio that will, among other things, be used to back up the retailer's Teradata data warehouse and MicroStrategy BI applications, Stone said.

The new data center is slated to be completed by year's end, he said.

> **We are having good response times. We are ready to take on new projects now.**
>
> **JAMES TAYLOR,** PROGRAM MANAGER FOR DATA WAREHOUSING AND BI, NORDSTROM

The home improvement company plans to use the Dual Active System Solution from Dayton, Ohio-based Teradata in the new data center and in its existing one in Winston-Salem, N.C., so that the data warehouse and BI tools can be run in both locations.

"Once you start making operational decisions that impact the lifeblood of your company, you have to make [BI] a Tier 1 application in your company," Stone said.

Nordstrom Inc. now has 5,000 MicroStrategy users running 10,000 reports per day, but it projects that its user base will grow to 20,000 running 35,000 reports per day by next year, said James Taylor, program manager for data warehousing and BI at the Seattle-based retailer.

To absorb this growth without suffering performance hits, the company last month moved its BI operations from a 32-bit Windows environment to 64-bit machines running Sun Microsystems Inc.'s Solaris 10 operating system.

So far, the company has seen a 9% decrease in report response times and an overall 30% improvement in performance, Taylor said.

"We are having good response times," he added. "We are ready to take on new projects now."

Vaidyanathan Seshan, IT project manager at Nordstrom, said that once the new systems were installed, "users did not see any change in look and feel [of the BI application]. For them, it was a nonevent."

– HEATHER HAVENSTEIN

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FRANK HAYES ■ FRANKLY SPEAKING

Vista Rush

MURCHNICK looked across at the Old Man in disbelief. "We're not gonna upgrade to Vista until *when?*"

"Maybe next year," the Old Man said. Uh-oh, he thought — here comes trouble. "What's wrong, Murch? I thought everything was running fine for your sales guys. You don't need Vista. And you know it's going to take time to figure out how much hardware Vista will require for us, and make sure none of our applications will break. What's the rush?"

"Well . . ." Murchnick hesitated. "I have to use it at home."

The Old Man's eyebrows went up. "Have to? As in, have to because you're getting a new PC and that's what will come on it?"

Murchnick nodded. "And your help desk guys say they won't give me the VPN software for it," he said. "Without that, I can't get on the network."

"We just started testing the VPN client on Vista," said the Old Man. "And before you ask, no, you're not a good candidate to be a test user."

"Why not?" demanded Murchnick. "I test things all the time."

"Yes, you do," the Old Man said. "You've tested almost everything you could buy at a computer store. Some of it even worked. But you know we've had to reimage your hard drive a lot."

"That's not my fault," Murchnick said. "Most of those things don't work very well."

"No, they don't. You like technology, and that's good, Murch, but you're not really a power user," said the Old Man, thinking, If there's a dead end or a bug, you'll trip over it. "That means we spend more time supporting you than we can afford already."

Murchnick shrugged. "OK, I get it. I don't get to work from home on my new PC. I'll just start taking my laptop home." He got up to go.

"Wait now, Murch," said the Old Man. Murchnick worked from home on his own PC because when he had taken laptops with him in the past, the results hadn't been pretty. "Let's rethink this. If we set you up to use your new PC on the VPN, what else would it be used for? Would your wife and kids be using it too?"

"Well, sure," said Murchnick.

"For games and MySpace and MP3s and Web surfing?"

"Yeah, yeah, all that stuff."

"And e-mail attachments and whatever programs look interesting?"

Murchnick frowned. "What's your point?" he asked.

FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at **frank_hayes@computerworld.com.**

You're my security team's idea of a worst-case scenario, thought the Old Man. But instead he said, "I think we might learn a lot from securing this new PC of yours. I wouldn't want them trying to juggle hundreds of users like you all at once, so starting with just you should be a good experience."

"Thanks — I think," Murchnick said.

The Old Man tapped at his keyboard. "We'll want to firewall and antivirus you to the teeth," he said. "Then we'll need to install remote-control software, so we can make configuration changes and check settings."

"Wait," said Murchnick, "you want to be able to take over my PC at home?"

"We just want to be ready in case anything goes wrong," said the Old Man. Which, with you, it always does, he thought. "Once we have all that in place, we can set up your VPN connection and start looking for any problems. I'll put Brad to work on it. I think we want to have just one person supporting you, so no issues fall between the cracks."

"Brad?" Murchnick scowled. "That guy never stops with the questions. He wants to know everything I did, and in what order, and when . . . ."

"Ah, you've worked with him before. Good," said the Old Man as he came around his desk. "Look, Murch, I really appreciate your doing this. I thought we were going to have two problems: dealing with you and finding out what issues our non-power-users were going to encounter with Vista."

He guided Murchnick toward the door by his elbow. "Instead, you'll get to use Vista before anyone else in your department, and we'll get a good test. I wish I had a dozen users like you, Murch."

"Well, sure," said Murch.

Yes, a dozen, thought the Old Man. Instead of hundreds.

What's the Big Hurry?

User walks into the office of this sysadmin pilot fish and says he's just received an e-mail telling him to see fish. I haven't sent you any messages, fish tells him. "So we walked over to his office to see this message," says fish. "Sure enough, there was a message, just as he said. Date the message was sent: June 4, 2003. We had been testing a new e-mail system then, and we sent test messages to all the users. Over three years later, the user finally responded."

SHARK TANK

Clean Room

Pilot fish is visiting a customer's computer room and asks for a floor-tile puller to get at cables under the raised floor. But he can't get the first tile he tries to move. Or the second or third. "I finally succeeded at removing one," says fish. "It was then I found the problem: All the tiles were severely corroded, and the tiles and grid were literally rusted together. I asked the customer about this. With a shrug he replied, 'Oh yeah, that's because the janitor comes in here every night and damp-mops the floor. Some of the water runs down between the tiles.' "

What If

It's a few years ago, and this pilot fish at a major airline is managing a project to pick a new data-hosting vendor. "While performing a risk analysis exercise, one of our eagle-eyed team members pointed out that the vendor's data center was located very near a missile base," fish says. "His concern: In the event of nuclear war, the data center could be destroyed and we could lose all our data. We sat staring at him until one team member broke the awkward silence by pointing out that the impact to our operations would be negligible, since we would probably be grounding our fleet in that situation anyway."

Great Idea

Deadline for installing a firewall at a customer site is fast approaching, and this pilot fish knows the hardware won't arrive in time. His suggestion: Use a test firewall from the lab until the new one comes in. "Can't do that," boss says. "It's a used machine and the customer only wants new ones." OK, says fish, but the new hardware won't arrive for two weeks and won't be ready until a week after that. Fast-forward a week, and the customer isn't happy about having no firewall. Boss to fish: "Why don't we just use one from the lab temporarily? We could swap it out when the new one arrives."

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